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ABSTRACT

This booklet describes the concepts behind the Architects-in-School Program and summarizes the program's successes and some of the problems it has encountered during its two years of implementation. Detailed descriptions of 48 program implementations in 26 States are provided. Each description is presented alphabetically by State and includes information on the architect-in-residence, locality and length of residency, resources and specific activities undertaken. Comments concerning each residency are also included. (EB)

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1977-1978

Architects-in-Schools

Architecture/Environmental Arts Component
Artists-in-Schools Program
National Endowment for the Arts

Architects-in-Schools is jointly sponsored by the
National Endowment for the Arts
(Education Program and Architecture/Planning & Design Program)
and the participating state arts agencies

Aase Eriksen, National Coordinator
John Hoare Kerr, Co-Project Director
Roy Knight, Co-Project Director

U.S. DEPARTMENT OF HEALTH,
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addition to the help offered to the local programs many community groups, help on a national scale has en essential to the success of the Architects-in-Schools mponent. The National Environmental Education Committee the American Institute of Architects has been very pportive. Local AIA chapters have often contributed me, materials and money. The Graduate School of Fine rts and the Department of Architecture of the University Pennsylvania have supported the program.

e office of the National Coordinator wishes to express s deep appreciation for this assistance.

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The Documentation and Resource Addendum, detailing the second year of the Architects-in-Schools program, is intended to be used as a resource in conjunction with the first year book, Architects-in-Schools 1976-77.

Architects-in-Schools Component

During its second year, the Architects-in-Schools program has expanded to reach more students and teachers in more schools all over the country. As a component of the Artists-in-Schools Program of the National Endowment for the Arts, it was designed to introduce an awareness of the built environment, and its impact, to the educational process. This year the program involved forty-eight architects-in-residence in twenty-six states.

At a time when educators are seeking ways to make the schools more responsive to today's needs, the introduction of built environment education is a much needed step. The built environment, comprised of cities, streets, houses, parks, and the spaces that connect them, surrounds us all our lives. The fact that most of us remain relatively unaware of it and our ability to influence it means that the built environment often fails to reflect our genuine concerns. The architects-in-residence seek to teach students and teachers to see what they look at, to become conscious of the influence of the environment on them, and to learn effective methods of changing that environment. The formal statement of goals is as follows:

* To bring about an awareness and understanding of the built environment for itself and as it relates to the natural environment.

* To use the built environment as the vehicle for understanding and teaching the traditional academic subjects within the existing curriculum.

* To be a resource to students and teachers, learning and teaching about the built environment.

* To help students and teachers analyze their surroundings and to help plan and carry out changes.

* To involve students and teachers in the design process by bringing the methods of design into the school.

* To participate with students and teachers in a project with a visible product.

* To develop a continuing involvement of the community and school using the built environment as a focus.

* To insure continuity by passing on to the teachers some of an architect's tools, special skills, and knowledge.

The architects-in-residence have become partners in the educational process over the last two years. The interaction with children and teachers has expanded the horizons of all within this partnership.

Since the program's inception in January 1976, Aase Eriksen has been the National Coordinator. Her responsibilities have included both the continued development and expansion of the program and its administration. The National Coordinator's Office works in close cooperation with the state arts councils and the Artists-in-Schools Coordinators. Continual support to the architects and teachers in the program is provided through information, materials, and resources including a newsletter.

The National Training Workshop, held by the National Coordinator's Office in August 1977, was an intensive training program, over two and a half days, for all attending. Sessions were held for first-year architects, second-year architects, In-School Coordinators, administrators, and Artists-in-Schools Coordinators. The experiences of architects-in-residence who had completed the first year were shared with those beginning. Slide shows, activities, problems, successes, and curricula were made available to everyone. Workbooks and first-year documentation books were distributed.

Further support was provided by the regional workshops for the North, South, and Midwest, held in November 1977, by the National Coordinator's Office. With the smaller groups, more intensive sharing of concerns and objectives was possible, and the participants found a valuable resource.

Throughout the year, the National Coordinator is in telephone and letter contact with the state arts councils, with the Artists-in-Schools Coordinators, and with the architects-in-residence. Continual support and advice are offered, resources are suggested and made available, and problems are solved.

Finally, site visits were an important means of support offered by the National Coordinator. Visits were made by the National Coordinator, by the Project Coordinator, and by second-year architects-in-residence. Not only were on-the-spot recommendations and suggestions possible with this help, but the visit often had the effect of generating publicity and making the program more visible in the school.

The responsibility for the program at the state and local level lies essentially with the state arts councils and their official representatives, the Artists-in-Schools Coordinators. The coordinator publicizes the program, selects the site and the professional-in-residence, and provides administrative support.

In the site selection process, the interest and commitment of the school and its administration have proved to be paramount in importance. Experience has proved, over the two years of the program's existence, that an effective dissemination of information about it, statewide, will usually result in several schools requesting the component. When only these schools are considered as possible sites, the chances of the program's success are far greater. Lack of understanding of the goals of the pro-

gram at any level--school district, school administration, or faculty--can produce problems which can be easily avoided by a careful selection and information process.

The selection of a design professional to be the architect-in-residence is usually done through a selection panel. Again, experience has indicated the importance of including in this panel representatives of the schools choosing the program, representatives from the local AIA chapter, representatives from any local school of architecture, and when possible, former architects-in-residence. The design professionals who have been employed in the program have included architects, designers, landscape architects, architectural historians, and planners. They were of different ages and different levels of professional experience. Some had experience working with children, some had not. None of these factors seem to have had any bearing on the success of the residency. An openness to new experiences, a basic enthusiasm for the educational process, and an ability to communicate in a free and friendly manner with adults and children alike, seem to be the essential criteria for success.

In each school, the In-School Coordinator (ISC) has a strong bearing on the success of the program. The ISC's role is one of bridging the separate worlds of the "outsider" architect-in-residence and the school community. For this reason, the coordinator needs to be someone who has a broad view of the school program, a rapport with the faculty, and a degree of power in the decision-making process within the school. Released time for the ISC to work and plan with resident has proved to be essential.

One of the most vital elements in a residency has been the active support of the school principal. Principals have arranged released time for teachers, approved projects, encouraged teachers to work with the resident, and enlisted community support. One principal was so affected by his work with the program that he changed the location of his office and lowered the counters in the main office to make the space inviting and comfortable for the children. The impact of this kind of support is felt throughout a school.

There have been an amazing number of variations in the overall design of a residency. The time spent in schools with highly successful programs has ranged from full time for the whole school year to one morning a week for a semester. Schools have ranged from kindergarten through high school, from traditional to open classroom. Some residents have worked with one school only, some with as many as eight. Residents have worked with core groups of a single grade, with teachers requesting the program, with gifted children, with special education classes, or with a whole school. From the experience with these variations a number of evaluations can be made after two years.

The initial recommendation made by the National Coordinator was that an architect-in-residence should work full time in the school. However, an on-going career focus outside the school experience has been valuable both for the resident and as an outside resource for the children. A three-day-a-week commitment to the school has proved to be the most generally successful time frame. One school district with a number of architects-in-residence has worked out a program whereby the resident spends a

heavy concentration of time the first year, a lesser amount of time the second year, and will be available as an occasional consultant in the third year. Flexibility in time commitment can mean that experienced architects with successful practices can free time to become residents, or can share a residency with another architect. A residency for less than three days a week can be successful if very careful planning with very enthusiastic teachers enables them to follow through with projects on their own. However, this is not the best solution; more time is very desirable.

Success in working with different ages is a variable that depends largely on the architect-in-residence. Some have felt that they wanted to concentrate entirely on fifth grade or older, while others have been hugely successful with first and second graders. A realistic understanding of what can be expected of children in terms of attention span, manual dexterity, and cognitive skills at any age seems to be the operative factor in this case. This is where the teacher's understanding of the students must be a major resource for the resident.

In this context it should be emphasized that the teacher and the resident must work together as a team. Occasional teachers have used the resident as a "babysitter" and left the classroom while projects were going on. Occasional middle or high schools have assigned the resident to a classroom to teach a course in drafting or "architecture." Neither of these occurrences lies within the goals of the program, which state clearly that students and teachers must be involved. The continuity of the environmental approach to education depends on the exposure of teachers to the process so that they can feel able to continue it after the resident has left. Fortunately, most teachers have become just as enthusiastic as the students about this new approach and are glad to participate.

Most schools, whether traditional or open classroom, can manage to schedule blocks of time when the architect-in-school can work with a class for an extended period. A demonstration of the relationship of the design process to traditional subject skills can make somewhat reluctant teachers more willing to devote part of the school day to a new program. Middle schools and high schools, however, usually have highly structured schedules in which the whole day revolves around the fifty-minute period. This generally means that the resident works within the traditional subject areas along with teachers who ask for assistance. Most often the residents have worked closely with art, drafting, and shop teachers, which restricts the impact of the program somewhat. After-school projects have enabled a wider spectrum of students to participate.

In the matter of the number of schools involved in one residency, a fairly clear judgment can be made. Single-site residencies make possible a far more in-depth impact on students and teachers than multiple sites. Happy combinations have been worked out: for example, one architect spent a semester in an elementary school while doing some planning with a high school; when he moved to the high school he was nearby as a consultant for the elementary school. But involvement with more than two or three schools tends to tax the enthusiasm of all but the most energetic architects, and the program is spread too thinly. In addition, it has been clearly observed that short-term residencies become wrapped up in

he quick production of a visible product, while long-term ones can approach the whole design process n a thoroughgoing manner.

hich students in a school are to be involved in the program is simply a matter of teacher preference nd interest. Very successful work has taken place not only at all age levels, but at all levels of bility from gifted to mentally retarded or learning-disabled. The hands-on approach to specific asks has created excitement in students who have previously been uninterested or unsuccessful in chool. Some of the most remarkable results in this past year have been achieved with special ed- cation classes. Measuring, model-making, and construction make sense out of abstract skills which ave previously been too much for children with learning difficulties to grasp. One teacher remarked fter a completed project had been a source of admiration from the whole school that it was the first ime her students had felt that "special" education was a positive term.

he visibility of a program within a school is a factor in the interest it generates. The optimum olution has proved to be: (1) an introductory meeting between resident and teachers before school tarts so that the teachers have a chance to plan to include the program, (2) an introductory meet- ng very early in the year with the parent organization to explain the program, and (3) a very visible roject right at the beginning of the year to capture the interest of the students.

he school's expectations for a residency must be correlated with the goals of the AIS program to pro- uce a common viewpoint. Once the personnel in a school truly comprehend the meaning of the program, he resident has the freedom to allow the program to develop to fit the circumstances, and is more or ess assured of cooperation from faculty and staff. Considerable tact is necessary in the introductor eriod, and here is where a dedicated and influential In-School Coordinator makes all the difference i asing the entry.

ver the two years of the Architects-in-Schools program, certain factors have been identified which ake participants feel successful. For the students, the most important has been the ability and oppo unity to change their environment. The skills and problem-solving techniques they have learned in th esign process, their new awareness of their surroundings, are all important, but the sense of accom- lishment and power they acquire when they effect change in the school is the major factor. For the eacher, the most vital thing has been the visible development of the students in skills and attitude. gain, the new materials for teaching and the new ways of looking at old materials are very important o them, but not the most important. For the principal, two factors are paramount in the success of he program: the change in teachers' attitudes as they often develop new energy, new materials, and a ense of cooperation; and the visible "product" of the residency, whether it be a redesigned playgroun renovated lounge, or wall murals. The enthusiastic participation of parents in many of these pro- rams has also been mentioned by teachers and principals. And, finally, the architect-in-residence ha elt successful not only because of the product, but because of the response from teachers, parents, a hildren. Design professionals have found that a chance to share their enthusiasms and their skills,

and to design with the "client" is an enriching and exciting experience.

It should be mentioned here that the resident's insistance on a high level of quality is often a new experience for both children and teachers. Measurements must be correct so that models will fit together. Murals must be planned and worked out in detail before they are painted, no matter how impatient the students are to start painting. The whole design process of analysis, planning, and production must be followed to have a successful result. And when the results are seen to be successful and professional-looking, the process makes sense to the students.

The close coordination of projects with the existing curricula has been a major factor in the enthusiastic acceptance of the program by teachers. The obvious result of improved math skills in pupils who have to measure rooms, draw plans to scale, build models in different scales, and calculate amounts of materials needed make the hands-on approach an important part of school work. Community or city/town studies involve not only education in the built environment but also history, economics, and civics.

The neighborhood studies undertaken by most architects-in-residence have resulted in a vastly increased awareness in both children and their parents. Streetscapes, architectural details, and land use become part of their visual comprehension, leading to a sensitivity to the built environment never felt before.

Frustrations have arisen in some school programs. These range from the difficulty of getting funds released for supplies and materials to indifference or suspicion on the part of teachers. The Artists-in-Schools Coordinator can often make arrangements to ease the funds situation, or alternative solutions have been found, such as materials donated by local businesses or fundraising efforts by parents and children. Some difficulties have arisen because the school's expectations were not made clear to the resident; others because the resident was not sufficiently aware of the rhythm of the school year with its testing, exams, vacations and so on. Both situations are usually the result of insufficient planning and communication.

The problem of teachers who are reluctant to cooperate or to try a new approach, on the other hand, can usually only be dealt with by showing them a very successful program with more cooperative teachers in the same school. This often resulted in a complete turnaround in attitudes. The sight of one enthusiastic, involved child who was formerly a troublemaker speaks louder than days of lecturing on the values of the program. Sometimes, too, the resident is able to work well within previously established classroom goals and, by showing the relevance of the design process to traditional skills, can change a teacher's attitude.

Since many residencies were in their second year in 1977-78, comparisons and conclusions are possible. Again there were variations. Some residents continued in the same school or schools. Some moved to different schools but drew on the experience of the first year and were sometimes available as consultants to the first-year schools. Again, the differences in sites and residents led to different con-

clusions. One resident mentioned that a project left unfinished in her first-year school had been at the stage where students and teachers could take over and finish it, thereby giving them more confidence in their ability to continue with design approach than if she had been there. Another, however, felt strongly that projects should be finished in one year, even if the same school continued with the same resident. He stated that the children who started it were disappointed in not finishing it, while the children who completed it felt they had been saddled with someone else's project. Generally speaking, it seems better not only to complete a project, but to complete it before the end of the school year so that the "designers" may have time to enjoy it. Then plans or suggestions for further projects can be left to encourage continuity.

More teacher training, on a larger scale, seems to have taken place in the second year. The architects-in-residence have become more comfortable in a school situation and more aware of what they can offer teachers. The more intensive work with teachers, moreover, gives the faculty the background and the skills to carry on when the resident leaves. Workshops seem to have been the most successful format for teacher education, and these have been most effective if teachers are given either released time or inservice credit, or both, for them.

Teacher training in the first year has tended to be more informal. Some suggestions for more formal efforts have included using a former architect-in-residence to run an introductory workshop, since beginning residents often do not yet have the skills to do so. A design workshop on space planning to offer teachers direct help with classroom arrangement is also a very helpful introduction.

Whether a second-year resident in the same school should continue working with the same teachers to build on the previous year, or branch out with new teachers and students, needs clarification before the year begins. Misunderstandings with administrators have occurred on this score.

Most second-year residencies have been outstandingly successful, with enthusiasm building and more people participating as the program gained momentum. In a few cases, momentum was lost and the second year less successful; this seems to have been due to a loss of excitement on the part of the resident, perhaps because of other pressures. And some schools or school districts have elected not to continue for the second year. Reasons for this seem to have ranged from the cost of the program, through misunderstanding of the goals, to the program's being identified too closely with a particular resident who may have run into difficulties.

As the Architects-in-Schools program enters its third year, its effects are becoming more widespread. Not only are more states and more sites participating, but the value of the program has led areas which have completed the two-year cycle to continue in various ways on their own. Schools of Architecture in several universities are initiating courses or workshops in built environment education, often taught by former architects-in-residence. Work in local schools is often a part of the course. Some volunteer associations have provided docents to take some training and go into the schools to work. Resi-

dents have left either written lesson plans or workbooks of suggested projects with their schools, and teachers have been given the skills to continue. One city has funded new and continuing residencies entirely out of its school budget; in addition, it has redesigned its entire arts curriculum to include built environment education. Some residents have carefully written and organized their year-end reports with illustrations and activities included so that the report can be published as both a workbook and a public relations document.

The support of the state arts agencies has been vital to the continuance of the Architects-in-Schools component. They make the program work; the dissemination of information to the schools, the allocation of funds, the generation of support at state and local levels is their responsibility. The success and expansion of the program bears witness to their work.

More work, of course, is always needed to improve and expand the program. Evaluations need to be sought from students, teachers, and administrators more regularly. Residents' reports need to be of a more consistently high quality; they have ranged from superbly organized to incomplete and chaotic. The National Coordinator's Office is urging the residents to make more use of the resources available through their headquarters. The growing network of former and present residents can provide increasing amounts of support. School district administrators and board members could be invited to visit the sites to meet the children and see the fine work taking place; this has usually generated interest where it has occurred. In general, it can be stated that the more the program is made visible to educators, the more enthusiasm it generates. The problem-solving techniques, improved basic skills, and increased sensitivity of students in the program are the best testimony to its success.

Residencies

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: HETTIE MARY WORLEY LITTLE ROCK MONTESSORI Little Rock, Arkansas Site: Suburban Population: 30 students 3 faculty Grade level: Elementary UNIVERSITY OF ARKANSAS EARLY CHILDHOOD DEVELOPMENT CENTER - KRAMER SCHOOL Little Rock, Arkansas Site: Urban Grade level: 18 mos - 6th OAK GROVE ELEMENTARY Little Rock, Arkansas In-School Coordinator: WILLIAM FULTON, State Environmental Consultant	The resident worked two days a week at the Montessori school and one day at Kramer. The Oak Grove commitment was for one day a week for eight weeks only, and two to four hours a week were spent as consultant to the Arkansas Department of Education. She worked with the Arkansas Art Center's State Services Program to conceptualize and plan a one-day conference, "Person, Space & Place," held with the support of the Arkansas AIA. The local AIA provided a team to help design an exhibit for children on personal space and shelter. Other outside consultants who helped with the conference included a professor of architecture from New Jersey, the Chairman of Design of the Kansas City Art Institute, a consultant on environment and education, and two educational consultants.	The parents of the Montessori Elementary School were aware of the work the architect had done at Gibbs Intermediate School the previous year and wanted to expand the educational experiences of their children. The assistant teacher worked with Worley to coordinate the awareness and design activities with her work in movement. The program moved from initial explorations of self and feelings through drawing and writing into mapping, observation, and design. The children took field trips to the Natural History Museum to study habitat, to the First State Capitol to study building materials and details, to the Quapaw Quarter historic district to discuss street and house scale, and other places to develop awareness of cities and materials. The children discussed the design of a city in relation to its needs, spaces, and services, learned about systems, and finally built a model city. They took their model to the parent-run Arts, Craft and Design Fair and took turns explaining it to people. They were disappointed that no one really seemed interested in how they designed it, that the only question was "Did you do this?" Their answer was, "Don't you want to know why?" At the Kramer School Project the teachers needed help in affecting the overcrowded, visually unattractive environment. Worley had worked with the parents and teachers the previous year on the playground. She worked one day a week with individual teachers on the design of their classrooms, and applied for, but did not get, mini-grants from the school system to construct new spaces. At both Kramer and Oak Grove she helped design and paint graphics in the school. At the Arkansas Department of Education Worley worked with the Environmental Consultant to develop a guide "Reading the Environment," for teaching environmental education, and photographed different types of buildings around the state for a slide show introducing built environment education to teachers. Worley also teaches the built environment segment of two three-hour graduate courses in environmental education teaching methods offered in the state. The Arkansas Art Center, with the cooperation of the Arkansas Chapter of the AIA, sponsored an enormously successful one-day conference called "Person, Space and Place: Building for People." The AIS resident worked with the Center in conceptualizing and planning the conference, and also did the graphics for it. The conference, which was on the design of personal space, the creation of a sense of place, and the nature of meaningful design, was an effort to explore these ideas with teachers and the general public. As part of the design, Worley consulted with a team from the AIA on an exhibit for children on basic concepts of shelter, which is to be reworked before traveling through the state.	In visiting the school that I was in last year, I found that the teachers had continued all the projects that we began, that the spirit of the work with the children and teacher had settled into the patterns of the school. At the time I had felt that everything was left unfinished . . . when in fact it was exactly at a point where they could pick it up. As architects we are so concerned with finished form in our work that it is difficult . . . learning to trust the quality of the process to be enough.

Connecticut

Resident/Site	Residency/Resources	Program
Architect-in-Residence: STANISLAW DZIURZYNSKI BURDICK MIDDLE Stamford, Connecticut Site: Urban Population: 660 students 62 faculty Grade level: 6th - 8th In-School Coordinator: DAVID POTTER, Principal Project Coordinator: JOHN NERREAU	The architect worked from February to June. He arrived the same year as a new principal who wishes to redesign the curriculum, the physical structure, and the appearance of the school. The architect is working to support this and is involving the students in the process. The program is designed to continue for two or three years. Plans for an advisory group have been made, and the local AIA is helping to set up an advisory committee of local architects for next year. The PTO provided funds for sunplies, while the school system provided additional funding. The [illegible] was very enthusiastic and supportive. The school board expects Burdick Middle School to be a factor in revitalizing education at this level in Stamford.	The Burdick program got off to a late start, but is expected to continue with increasing effectiveness. The new principal hopes to use Stamford and its urban redevelopment as a classroom, as part of his effort to reorganize the school. A Neighborhood Advisory Committee has been formed which is interested in having the area designated a historic district, in supporting a quality school which would serve all ages, and in helping to obtain funds to renovate the school building. With the help of the AIS resident, the library is developing a resource section on the built environment. The assistance of the local AIA chapter has been enlisted in strengthening this section through the donation of books, old Sweet's catalogs, and magazines. In addition, the students are working with the architect to redesign the Media Center/Library to provide impetus for quiet study and increased usage. The architect's first project was the conversion of an old storage area into a workshop, with funds provided by the PTO. The students helping were fascinated by the natural woodwork and floors revealed by stripping and wanted to see the whole school done. The visual enlargement of the space by the use of warm-white walls was a source of amazement to them to the extent that "visitors" came in a steady stream. This fit in with the principal's idea of letting the kids see what the AIS was doing so they would go to him with ideas. Dziurzinski worked closely with an English teacher to coordinate a language arts aspect with independent projects in drafting, model-making and design, art, architecture, and engineering. The results were very successful, and the program will be expanded. The students developed in specific skills, community awareness, vocabulary, and knowledge of career options. Next year the AIS resident plans to coordinate his mini-course in drafting with applied science. A class of 20 students was set up to work on an outdoor classroom. They explored the available spaces, surveyed and measured sites, made scale drawings and models of the existing conditions, and designed the classroom. The curriculum then called for preparing finished drawings for possible construction and, if possible, actually building it.

Dziurzynski used his special interest in solar energy with a seventh-grade lecture and follow-up project after Sun Day. After the students had tested the heat-absorbing properties of white, black and reflective papers and had discussed heat exchange, they designed a solar collector. Metalworking and woodworking classes made the parts, which the students then assembled. When tested, the collector made water hot enough to make instant coffee.

The seventh graders also heard, with great enthusiasm, a slide lecture on the architectural heritage of Stamford, given by a local architectural historian. The familiarity of the buildings shown made them doubly conscious of shock at the alteration and destruction that were shown as part of the program. The loss of pedestrian scale in downtown Stamford was apparent in comparative slides separated by years. The students developed an increased awareness of and sensitivity to their architectural environment.

Comment

These first six months acquainted the faculty with the potentials of the AIS resident's interaction with the educational process at Burdick and laid a solid foundation for his 2 - 3 year residency.

The resident:

I was very happy with this (solar collector) project. It exposed the student to the design process from conceptualization to finished product, and it allow the students to take advantage of resources and personnel within the school in a way they never did before.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence THOMAS J. GOETTING REDDING MIDDLE Middletown, Delaware Site: Rural Population: 612 students 43 faculty Grade level: Middle In-School Coordinator: LEONARD V. LUNDBERG, Principal	The residency was five days a week from November 15, 1977 to June 15, 1978.	Goetting worked with thirty-five gifted and talented students in two separate groups, each of which created an imaginary society. They made artifacts for the society: clay models and figurines of the citizens, maps, written materials, and wall murals painted on found-object white tiles. As many details and aspects of the society as they could imagine were included. By prior arrangement with the owner of a nearby field, the classes buried their creations,; a week later they dug up the other class's artifacts and tried to reconstruct each other's societies. A major project was a solar collector for Sun Day. The students studied solar energy and how it is used, then built a collector out of scavenged and used materials. They tested it extensively and exhibited it on Sun Day in downtown Wilmington. Groups of students met weekly with the resident in the industrial arts room to discuss man's use of spaces, emphasizing a sensory approach. Goetting presented a workshop for teachers on integrating the AIS program with the curriculum to a group of teachers in mid-year.	

Resident/Site

Architect-in-Residence:

ROGER GRUNKE

CAMPBELL PARK ELEMENTARY
St. Petersburg, Florida

Site: Urban
Population: 471 students
64 faculty
Grade level: Elementary

SIXTEENTH STREET MIDDLE
St. Petersburg, Florida

Site: Urban
Population: 1178 students
70 faculty
Grade level: Middle

In-School Coordinator:
R. HODDINOTT, Gifted Student Teacher
R. IRWIN, Occupational SPECIALIST

PONCE DE LEON
Clearwater, Florida

Site: Urban
Population: 627 students
Grade level: Elementary

In-School Coordinator:
E. MOSICH, School Coordinator

BELLAIR SCHOOL
Clearwater, Florida

Site: Suburban
Population: 389 students
25 faculty
Grade level: Elementary

Project Coordinator:

KATHLEEN KINAHAN

Residency/Resources

Four schools were reached in the fall residency. At Campbell Park and Ponce de Leon, Grunke worked two days a week for 12 weeks. At Bellair he worked 4 days a week every other week during the fourth quarter. He served at 16th Street Middle School two days a week for three quarters, then alternated weeks with Bellair the final quarter.

During the short residencies, the AIS resident had his own classes in environmental education, sometimes in coordination with art teachers. At the Middle School he worked in the morning with small groups of students or as guest lecturer; in the afternoon he had a steady core group of students for projects.

The most visible outside consultants were a Seminole Indian family, who built a "chickee" on the grounds of one school. Considerable media interest was generated; public relations were generally a strong focus.

The resident produced a 17-minute audio-visual report entitled "Why? An Architect-in-Schools," which was presented to local school board officials and the state arts council.

Funding was provided by the Pinellas County Arts Council, the St. Petersburg Arts Commission, and the Pinellas County School Board. The Arts Council also provided in-kind services.

Program

In the 24-day elementary school residencies, children had a regular class with the architect and were taken through a six-lesson course, which begins with a study of the natural environment, continues with built environment, then culminates with the relation of built and natural environment to social environment. In some cases the activities were coordinated with the art teacher. The course also included field trips to the surrounding neighborhoods and parks to see the principles discussed actually in operation.

In the longer middle school residency the projects were more manually oriented. Laboring under the assumption that the conditions at the school were unalterable, the students had first to be convinced that they could effect change. In tackling the problem of visual orientation, they worked out a system of graphic designs for restroom doors and for identifying classrooms and classroom wings. They continued analyzing the school and community with photo-verbal diagrams. The course continued with identification of problems and specific suggestions for improvement in the cafeteria and the restrooms, which were composed in a letter to the school board asking for help.

In addition, built environment education was used as a foundation to teach a required fifth grade course entitled "Florida Studies." The teacher was open and enthusiastic, and wishes to continue teaching the course from this angle.

Comment

Activities which overextend the standard 45 minute class period are held in suspicion by most teachers. Classes that take children off campus for whole afternoons are coveted by teachers who are irreversably locked into a classroom situation. After an almost religious crusade to keep children from writing on walls, a course which encourages children to draw on walls in generally ill-accepted. Opposition to the atypical is the largest obstacle.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: ROBERT FUJIWARA	This residency was from February 21 to June 1, 1978. In addition to his landscape work with students at one high school, Fujiwara presented slide shows on landscape architecture to a number of other high schools in the district. The result of this was that two other schools have requested the AIS component for next year. Fujiwara also gave slide lectures to a number of community groups.	A remarkable fusion of skills took place in this residency as a sculptor and a landscape architect worked together on the school site. The high school involved was placed on a site of incredible beauty, on the beach at the foot of a mountain, yet the ocean was not visible from any place inside the school or anywhere in its main outside orientation. The focus of the joint residency was to open up the site to the sea. A huge outdoor sculpture was designed in the studio space the residents shared, and students were invited to help in its siting and the redesign of the beach side of the school. As they began to clear the cluttered site, the students were amazed at the spectacular view which had been in the school's "backyard" all along. The sculpture was used as a monumental focal point for the landscaping. Because of other construction activity on the school grounds, the project was not completed this year, but is expected to be finished next year.	

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: TED GREEN PEARL CITY & WAIPAHU COMPLEX (14 schools) Leeward District of Oahu Grade level: All In-School Coordinator: PAUL LEE	This was a very unusual residency, in that the architect was expected to make only three visits to each of fourteen schools. The number of schools for Phase I was reduced to twelve because of scheduling problems, nine elected to go on to Phase II, and five to Phase III. A total of 170 hours was meant to be scheduled. The chief target grades were the 5th, the 7th, and certain classes in the 11th. One school continued with a major project. Trees for the planting projects were donated by a local nursery. Five civic associations donated material for benches to be built by the wood shop at one school. Plants were also grown in the schools' nurseries for the project. The local AIA was very supportive of the program.	Green made an initial visit to each of twelve schools to give a slide and lecture presentation to several classes. He explained the role of the landscape architect, including discussion of the natural environment, manmade features lacking landscaping, landscaping improvements and why we landscape, and the preservation of natural features. The second phase involved visits to the nine schools electing to continue the program. Green took classes with teachers on a one-hour campus walk, discussing the existing natural and manmade features on the school grounds. He presented the process of design which would lead to the siting and planting of a grove of trees on each campus. Over a thousand students participated in these walks. The final phase took place in five schools as a Saturday morning work day. Students and teachers, with parents at one school, planted and fertilized a grove of trees on the grounds. Green continued to discuss the landscape architect's role with the participants. One high school went on to a major landscaping project around the gymnasium. Working with horticulture students, Green evolved the design while explaining to them steps in the design process, recognition of limitations, availability of materials, specifications and cost estimates, and administrative acceptance. The contract for this project has been extended to November 1978 to allow for completion. Woodshop students will make benches from donated materials, donated trees will be planted, and plants from the school nursery will be installed. Green feels that the response was very good, and that the students have been introduced to the roles of the landscape architect and the landscape contractor.	Green: It appears that no one has ever introduced the teachers to the plant materials and man-made landscaping features of their school grounds and how they might be used as a source (or reference) material in teaching ecology.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: JOHN MILLER NILES NORTH TOWNSHIP HIGH Morton Grove, Illinois Site: Suburban Population: 2186 students 230 faculty Grade level: Secondary In-School Coordinator: RAY CARRELL, Technical Drawing Instructor	Miller did a joint schools/community residency, though the two were not related. He worked one half day every day at the school, for 15 to 20 hours, from October 5, 1977, to June 15, 1978. Most of his work was with drafting classes, with some input for humanities and home economics classes. An architect who specialized in solar energy gave a lecture on home applications of solar energy, environmental design and climate, demonstrating the principles by showing work his firm had done. The school donated funds for supplies for the redesign of the school lounge. Doors were purchased at low cost to use as dividers in the lounge; rugs were donated to cover the cubes the student made. Miller was introduced to parents at a PTA Open House where student work was displayed.	The entering activity for the AIS resident in this high school was a field trip to Chicago for the drafting classes. They explored the Loop area, comparing two plazas and studying several famous buildings in the area. They also visited the Art Institute and the Archicenter to see special architectural exhibits. Discussions with slides followed in class to reinforce what was learned on the trip. The drafting classes next spent several weeks learning to do perspectives and isometrics. The drafting teacher, who was also the In-School Coordinator, was able to work closely with the resident during this period to increase both awareness and skill in the students. The chief focus of the residency was the redesign of the student lounge, a widely used but visually unappealing room. A questionnaire about its uses was circulated among about one-fourth of the students. Drafting students made a model of the space and did much of the actual building. Drawings they made of the project were approved by the administration. Forty wooden cubes were built by drafting students and art students and covered with donated carpet. After room dividers were built with flush doors, art stduents designed and painted murals on them. Miller feels that momentum for further development of the space has been established. Work with the drafting students proceeded with the introduction of bubble diagrams to indicate function. They explored the school's areas and created a series of signs and a master map to help visitors or new students. Their final project was townhouse design; each student was given a site and an imaginary family to design for. The resident felt that the designing of spaces to respond to the site and the family's different demands on living spaces was an excellent exercise.	

Resident/Site

Architect-in-Residence:

GARY OLSEN

BOOKER T WASHINGTON
Champaign, Illinois

Site: Urban
Population: 332 students
35 faculty
Grade level: K - 5th

In-School Coordinator:
BARBARA DINOVO

CENTRAL HIGH
Champaign, Illinois

Site: Urban
Population: 1350 students
101 faculty
Grade level: 9th - 12th

In-School Coordinator:
JOHN SCARPETTA, Architectural Drafting Teacher

CENTENNIAL HIGH
Champaign, Illinois

Site: Urban
Population: 1105 students
115 faculty
Grade level: 9th - 12th

In-School Coordinator:
ALLEN BOEHM, Architectural Drafting Teacher

Project Coordinator:

GUY JONES

Residency/Resources

This residency, which took place in three schools with a mini-course in a fourth, was three days a week for the full school year. The first semester was spent at Washington Elementary School for children from the entire school district, offering a specialized program in which the University of Illinois participates. The emphasis is on humanistic, personalized education with variety and flexibility. The architect spent half his time in the second and third grade classroom of his cooperating teacher, and half on various projects with other classes and in the design laboratory.

The early part of the second semester was spent at Central, but during the last third of the year Olsen's time was shared equally with Central and Centennial. He worked almost entirely with architectural drafting classes at both schools.

The architect had strong community involvement and made use of many resource people, and places. Field trips included a cemetery, construction sites, the Champaign County Historical Museum, the University of Illinois at Champaign-Urbana, and neighborhood historical areas. Local architects with specific areas of expertise were involved, a jury of professionals was used at the high school, and an expert in domes offered help both at Washington and at Central. Olsen, as president of the Central Illinois Chapter of the AIA, arranged a presentation by the National Coordinator of AIS during their April meeting.

The Champaign Unit #4 School District and the Central Illinois Builders Chapter of Associated General Contractors Industry Advancement Foundation both provided funding. The Junior League has promised both funding and docents to continue the program next year.

Program

Students at Washington Elementary were not only used to an open and self-determining teaching method, but also already had the benefit of a Design Laboratory headed by a very capable teacher. The school's PTO was instrumental in obtaining the residency and in determining the teacher with whom Olsen would be primarily associated.

This teacher's class of second and third graders began to study their immediate environment by drawing a plan of the classroom. As they progressed they learned to define in their own words such architectural terms as built environment, topography, solar orientation, etc., and the teacher followed up by using these terms in vocabulary, spelling and composition exercises. They learned to measure using not only yard and meter sticks, but also body parts (Mary's foot, Tommy's hand) and such construction materials as the floor tiles and concrete blocks in the classroom.

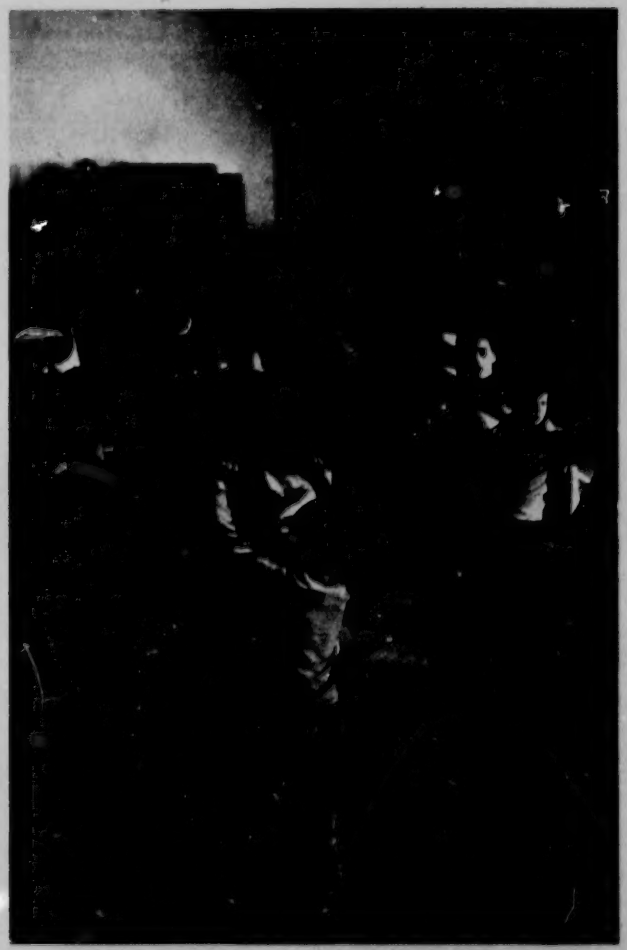
Next, they role-played the building of a dream house as architect, client, banker, and contractor, and found that designing was easier than paying for it. More "clients" came into the picture with the use of activity cards by CEMREL, Inc., which suggest building for such far out types as "A kangaroo with 120 different pocket handerchiefs" or "a clumsy snake who trips over his tail." With building blocks the children, in teams, took turns for fifteen minute intervals being architect, client, and laborers building an environment for the client. The "architect" delivered the rationale for the building, and the creation was wrecked (with great enthusiasm) for the next turn.

When the students defined the needs for their own classroom, they were able to form teams to define activity areas, create soft areas, add more color, and bring in plants, but felt the needed help in adding an interest center with two levels. As Olsen's residency at Washington ended at this point, he carried the problem with him to his residency at Central. The architectural drafting class was given the project, developed designs according to a program, and presented them to the clients (the students at Washington). Four finalists were chosen, a winner was selected, and with the aid of the shop classes, the structure was built and installed.

A similar approach was taken with Centennial High students in the design of a nature center for Washington to conceal an ugly concrete-block replacement of a glass block corridor area. Again, the client-architect-builder relationship was stressed.

Dome construction, with the aid of a local expert, took place both at Washington and at Central. The elementary students made mini-domes in many shapes, then built an open "reading center" dome in the library. Encouraged by this success, they built a much larger dome as an environment for the Artists-in-Schools dance component to use. This dome, in the gym/lunchroom, has also been used as a pretzel factory, a circus tent, and a space for elegant dining.

The final dome was a one-day ending activity at Central High. A dull courtyard was to be enlivened by a wood-and-fiberglass dome. Unfortunately, the fiberglass failed under stress, but the builders recovered and completed a smaller dome by the end of the day.



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Comment

Olsen:

The idea of having older students working with younger students within the district is a concept I've had for a long time and wanted to try. These first attempts of sharing experiences and resources worked fabulously for both age groups, and I am encouraged by the results to build on this concept in the future.

I do believe the students involved with this project gained more knowledge about characteristics and strengths of materials during this experience (the dome failure) than other more successful ones - and besides, if all our projects were complete successes, what challenges would I have left for next year?

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Resident/Site

Architect-in-Residence:

MYRENE TAYLOR

NORTHWESTERN HIGH
South Bend, Indiana

Site: Rural-Subruban
Population: 1200 students
Grade level: Middle & Secondary

ERVIN ELEMENTARY
South Bend, Indiana

Site: Rural-Suburban
Population: 350 students
Grade level: Elementary

HOWARD ELEMENTARY
South Bend, Indiana

Site: Rural-Suburban
Population: 350 students
Grade level: Elementary

In-School Coordinator:
MALCOLM BLACK, Art Teacher

Residency/Resources

This second-year residency was for the full school year, 2½ days per week. The four schools each had one quarter of AIS time. Due to winter blizzard conditions the third quarter, at the middle school, was severely curtailed, although some projects took place. The fall high school quarter was a continuation of the first-year residency at the same school, and largely involved the construction of landscaping plans devised last year.

Many visiting artists enriched the programs, including sculptors, weavers, painters, and theater designers. A surveyor/engineer was called in as consultant on landscaping.

Taylor collaborated with a science teacher on an article in the Indiana Science Teachers Publication. She lectured on teaching architecture to children at the Department of Architecture of Ball State University at Muncie.

Program

Along with implementing several landscaping plans around the high school, the AIS resident worked with several classes in art, architecture, and English. Basic art students were involved in describing three-dimensionally in white paper a word which evoked a feeling, then adding color. After a discussion of scale they treated their sculptures as buildings and designed a whole town with them.

In another art class, students had to create an entertaining environment for a ping pong ball with a two-foot cube area. The ball must spend at least 15 seconds within the cube in motion, and must experience three highlights. Spiral ramps, bumps, and other engineering designs were evolved, color and texture were introduced, and the project generated great excitement. The art teacher continued the project with logo design and silk screens.

In the second quarter, at Ervin Elementary, Taylor found that reading certain books on the built environemnt and discussing them in depth with the students was a very effective tool. She used Ingles' Big City Book with first graders and Macaulay's Pyramid and City with third and fifth graders.

Third graders measured and scaled their classroom, then were able to plan and execute a rearrangement on their own. They built a prototype reading center using a lifesize set of sheets, dowels, and connectors made by Taylor last year, which other teachers were interested in using.

In history class a fifth grade made a time line, learning architectural and family history to fit into it. They wrote reports on different developments in building materials and design, becoming very involved in discussions on them. A great deal of research was generated.

Geometry was introduced into an elementary math class through manipulation of 1" x 8" strips of paper. Students made different shapes, use them flat and on edge, applied stress (fingers) and learned which shapes were strongest by themselves. The final problem was for teams to make bridges of masking tape and newsprint, 1½" wide and rigid at one end, which would span between two desks and hold five textbooks. The teacher limited the excessive use of paper by "charging" $5000 per sheet. Some students achieved a load of 23 books before their bridges failed, and the enthusiasm reached the principal and science teacher, who came to watch.

Both with a sixth grade class here and with an eighth grade class in the middle school, Taylor initiated a science/math project of calculating heat loss in their homes. The work was extremely difficult for both classes, involving a great deal of re-explaining, but the results, which could be calculated in BTU's, converted to watts and then to dollars and cents, taught that math could be used for a purpose. Parents got involved helping to measure and draw plans at home and were very interested in the project.

In the final quarter of the residency, a third grade class built kites, from simple sail kites to complicated tetrahedrons. This involved not only studies of triangulation and structures, but also an experience in working well in groups. Measurement, scale, balance, careful work in details all became a part of the learning experience.

Fifth grade classes studying weather did work with how weather affects structures. Using books Taylor brought in, they studied rain, snow, ice, wind, tornadoes, sun, etc., presented their reports, and finally designed houses using a graph on weather effects which they had devised. The relationship of research to final product results in some thoughtful projects. Taylor's work in relating architecture to many varied school subjects makes her residency very relevant to the schools she worked in.

Comment

Taylor:

I still find working in the high school and junior high school somewhat restricting. Teachers are obligated to complete certain chapters in particular books and even when the weather cooperates it is difficult to finish all material . . . It takes much energy to find the teacher and project to match. If you find the correct combination it's easy to get the students involved.

Mathematics can become something real when shapes become geometry and geometry becomes buildings and even kites. The reasons, common sense for building structures, bridges, houses, kites is made clear. Students start to pick out other structures - like (the third grader) who told me that the backboard of his basketball hoop was structured using triangulation. That comment makes the entire lesson worthwhile.

Resident/Site

Architects-in-Residence:

TIM & GENEVIEVE KELLER

ROLFE COMMUNITY SCHOOL
Rolfe, Iowa

Site: Rural
Population: 346 students
44 faculty
Grade level: K - 12th

In-School Coordinator:
RITA BROWN, Secondary
Resource Teacher

STRATFORD COMMUNITY SCHOOL
Stratford, Iowa

Site: Rural
Population: 337 students
39 faculty
Grade level: K - 12th

In-School Coordinator:
LILTH DORR

Residency/Resources

This second-semester residency was divided equally between the two schools, with 40 hours of architectural time a week per school. The core group in each school was the fifth grade, but the architects worked with kindergarten through high school on special projects.

The administration at Rolfe was particularly supportive in providing time, space, and materials. The Lions Club in Rolfe encouraged the development of a plan for downtown enhancement; the local historical group in Stratford planned with the architects for a tour of the site of an extinct town nearby.

The Iowa Arts Council was very generous in providing visiting artists who complemented the program: a potter, a mime, a folksinger, a fiber artist, a graphic designer, a photographer, and two story-teller/folklorists.

Program

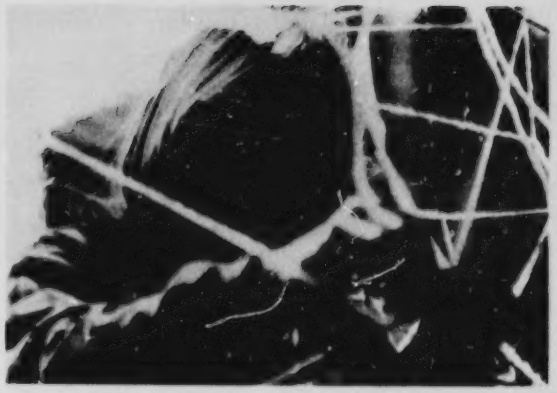
In both schools the architects worked consistently with the fifth grade, designing projects which would allow students to work both individually and in groups. The goals were to become more proficient in conceptualizing ideas, drawing, expressing themselves graphically, building things, exercising critical judgment, and designing and implementing a program. Both groups progressed well; students participated eagerly and developed a new awareness of design and the environment. The Rolfe fifth grade was a particular challenge: out of 29 students, 14 suffered some form of learning disability. The architects' willingness to work with this notoriously difficult class inspired an initial measure of respect and acceptance among the staff.

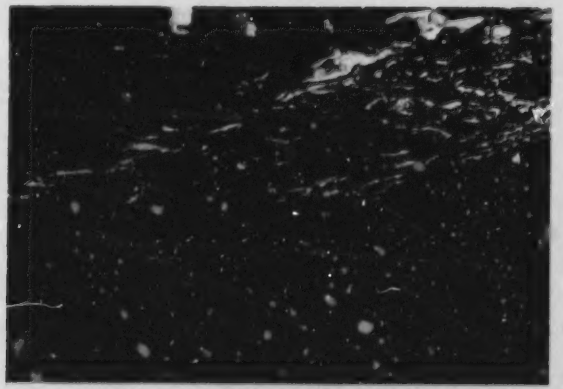
After some introductory activities, students in both classes, working in groups of four, used materials found in the school supply room to create Design Centers. With cardboard boxes, tubes, string, paper, styrofoam, balloons, etc. they designed and built specialized environments for the elementary school to experience. The architects assigned each group a design problem: "The Opposites," containing several opposite sensory experiences; "In the Dark," with hidden entrances and exits, completely dark in the interior; "Surprise," with four separate spaces each of which surprises the person entering, "Lookouts," with at least two levels and an attention-getting exterior; "Lowdown," in which a student could move comfortably without standing uprights; and "Solitude," a pleasant environment for solitary activities. Student groups evaluated their own and other groups' environments using aesthetics, function and construction as criteria.

A very successful elementary school project at both schools was the weaving of a fiber web (one in a drab outdoor play space, one in the lunchroom), with the help of a visiting fiber artist. The web was baling twine, colored yarn, string, and cloth strips.

The small town environment became an important part of the curriculum. Eighth grade students at Rolfe each selected a downtown building and researched its background, starting with a trip to the county court house to trace the deed, and continuing with oral histories, architectural research and analysis, photography, and sketches. Interior design students analyzed the visual and social condition and impact of the central business district and recommended to downtown merchants and the Lion's Club which sponsored the project, an enhancement plan for downtown. These groups plan to implement the suggestions. Stratford architectural drawing students prepared facade drawings of the buildings of their town's central business district.

Permanent enhancement of the two schools also took place. At Rolfe, the teachers and students worked together to plan and construct improvements in the teacher's lounge. At Stratford, a semester-long effort resulted in the renovation of the school library. With the enthusiastic cooperation of the librarian and the assistance of a graphic designer on loan from the Iowa Arts Council, a needs assessment, new spatial concept, graphic design for the walls, and selection of new and recycled furnishings transformed the space. The school plans to purchase the furnishings, and may continue to use graphics to improve the school environment.





Comment

Fifth Grader, Rolfe:

I learned that you should plan the things you build and take your time with what you're doing. You can't just slop something together and expect people to go through it.

Art teacher at Rolfe:

I feel that the program was very good. I think that through the architects the views of the community were expanded and a feeling of pride in the community was built up. Through their work . . . so much more happened than could have happened otherwise.

Superintendent, Stratford:

Very good. I expected the impossible but we came close to it.

Resident/Site

Architect-in-Residence:

EARL HEDRICK, JR

J F KENNEDY SENIOR HIGH
New Orleans, Louisiana

Site: Urban
Population: 1299 students
66 faculty

In-School Coordinator:
WALTER PARKER, Coordinator
for Distributive Education

Project Coordinator:

SHIRLEY TRUST COREY

Residency/Resources

Hedrick worked two days a week for the full school year at Kennedy High School. The residency is to continue for a second year.

The PTO provided guidance and funds. The Parkway Commission donated trees to be planted in front of the school.

An AIS Program Committee within the school acted as an advisory group throughout the year.

Program

The major thrust of the Kennedy residency was to use a design/planning approach in solving certain school problems, enhancing the school environment, and creating an awareness of a climate for change in the built environment.

In order to determine needs and priorities for projects, Hedrick and the AIS Program Committee distributed an in-school questionnaire and evaluated the findings. The next step was to establish a project-by-project work program.

Groups of two to three students from art classes worked on the initial project, on a period-by-period basis. The participation in the program increased as projects went on. The resident, teachers and students discussed the project, visited the site to determine its needs, and wrote up the goals of the project. This research phase was followed by the developing of a number of design solutions, their refinement, and the selection of a final design. Materials lists and a program for production were decided on, and the project was implemented.

A remarkable number of projects were completed, several are due to be finished early next year, and plans have been made for many more to be undertaken in the second year of the residency. Supergraphics for the facade of the main building, four wall graphics for the cafeteria, two more for the entrance hall and two for the art classroom, and a landscaping program involving the planting of nine river birch trees in front of the school were all completed. Underway are a major three-wall graphic for the cafeteria, another design for the art classroom, and two large oak sculptures. More graphics, much additional landscaping, and directional sign systems are planned for next year. Hedrick also plans to set up a seminar program on the design process which will involve other schools as well.

Comment

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: C LEVONNE LAUGHINGHOUSE L B LANDRY SENIOR New Orleans, Louisiana Site: Urban Population: 1247 students 63 faculty Grade level: Secondary In-School Coordinator: ROBERT JAMREAU, Industrial Arts Teacher Project Coordinator: SHIRLEY TRUST COREY	Laughinghouse worked Tuesdays and Thursdays in the school for the full academic year. He spent time in regular classes and worked with students formally or informally after school. Additional funding came from the New Orleans Chapter of the AIA and the Landry High School Student Activities Account. The students' design for a Cystic Fibrosis Foundation Christmas House won a prize. Shell Oil Company has offered to help publish an account of the residency, and a newsletter. Outside consultants included a muralist, an architect/planner, a utility construction engineer, and an interior designer/artist. Laughinghouse conducted an intensive one-day workshop on built environment consciousness at an elementary school in New Orleans.	Laughinghouse began the year by observing in many classrooms and taking notes on how he could assist in both the enhancement of the curriculum and improvement of the classroom environment. Because of lack of funds, a major project for redesigning and landscaping the school courtyard was unable to be done; funds for doing this and for continuing the residency have been requested. An initial project with the art classes involved the design for a Christmas house competition for a shopping mall. The Cystic Fibrosis Foundation initiated the contest, "Christmas in New Orleans with a Touch of Tut." The student project was a runner-up, winning $250 in prize money. As an exercise in planning and documenting a process while implementing it, an English class printed a mural on a "dull brown" wall in the cafeteria. The AIS resident led them through an environmental analysis of the space using all their senses, and helped them arrive at a project to improve it. The resulting mural, with student silhouettes superimposed on a pattern of rainbow-colored concentric circles, brightened the space. The teacher commented that he learned the value of involving other disciplines in "English" class. A major project involved shop students as well as child care students. Two classrooms were converted into a Day Care Center. The students learned the legal minimum standards for such centers, the reasons for them, and the needs for five basic curriculum/activities areas in the center. The center was designed, using bubble diagrams, scale drawings, and models, then built. The result has been very successful. In a special education class of slightly retarded students a unit on consumerism and budgeting was related to planning, budgeting and executing a graphic design covering the hall outside their classroom. Activities in math and civics classes included construction of a teacher work center and painting colorful graphics on the class wall. The teachers felt that the students learned that they were able to plan and do work, completing the task. Math classes also constructed model homes of the "shotgun" type predominant in the community. A business education class improved its atmosphere by constructing, with shop students, individual low-walled "offices" to secure a measure of privacy and enable the students to develop individual differences. In doing this the students learned measuring and problem solving skills. A faculty-initiated project for renovating their lounge was unfinished by the end of the year, but teachers planned to complete it on their own.	A teacher says: Students are proud of their classroom (The Day Care Center). Class cutting is practically nonexistent. Absenteeism is definitely at a low. The students bring friends, teachers, and parents to see "their" room.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: T. SCOTT TEAS PORTLAND HIGH Portland, Maine Site: Urban Population: 1430 students 68 faculty Grade level: 10th - 12th In-School Coordinator: GRETA LEVITAN, Art Teacher	This year-long residency was for one full day a week. Teas worked with art students initially, but was able to involve a number of other disciplines, particularly in science and math. The In-School Coordinator was particularly supportive. A reception in a historic building on the Portland Waterfront displayed student work with the AIS and brought together educators and members of the design community. Teas held a monthly lecture and workshop series for teachers in the Greater Portland area.	Teas worked with general art students to utilize their experience in perspective drawing for a study of the built environment. In preparation for the main project, the students drew textures they found in various places in the school and neighborhood. They then progressed to sketches of their own homes and neighborhoods, done after school and refined in class. The finished perspective drawings were carefully designed and painted in watercolor. Other art students, who had been drawing animals and human beings, designed and built scale models of animal homes. They discussed meeting real needs, expanded into imaginary needs, drew floor plans, and then selected several for teams to build. Teas said that many students originally thought the assignment was childish and too fanciful; they did not see the connection to their own environment. As they progressed, however, they became more aware of their own homes and of what they would like for their own rooms. They were very serious about the project, and the results were even better than expected. A core group of six very interested students spent free time the whole second semester building a studio space for the resident. The result was a consensus design involving many disciplines: art students built the model, physics students verified the structure, biology classes worked on ventilation and lighting, English students wrote a press release, math classes determined material needs, and economics students prepared cost estimates and materials-cost effectiveness. Over a hundred students had some input.	

Resident/Site

Architects-in-Residence:

ROBERT CLOSE
MICHAEL DUNN
CARL VOGT

CENTENNIAL SCHOOL DISTRICT
(6 schools: 1 sr high,
1 jr high, 4 elementary)
Circle Pines, Minnesota

Site: Suburban
Population (district-wide):
1500 students
80 faculty

In-School Coordinator:
Dr ROBERT BURESH

Residency/Resources

This second-year residency, continuing at the same sites, took place in all six schools of the district. The team differed slightly, in that Michael Dunn, an architect in training, replaced a visual artist.

The schools are located in a suburb of Minneapolis/St. Paul.

Program

The projects at all six schools involved exterior site improvements. These include design and construction of playlots with equipment, nature trails, jogging trails, entry court areas, interior courtyards and amphitheaters, all complete with tree and shrubbery plantings.

The three Centennial schools share a large campus. During the first year, a master plan was developed for tying the campus together with interrelated pedestrian circulation systems and with tree planting. The second year brought improvements to the individual schools. At the elementary school an 80 foot circle was cut into the asphalt and filled with sand, and a large pole play climber was installed. Trees were planted in a related semicircular area. At the junior high, the students helped design and build entry court areas at two of the school's main entrances. Their projects helped to make these entries function better as well as to make them feel more significant as arrival spaces. And at the senior high, students from an environmental studies class became very involved with designing and building an interior courtyard for the school. They developed plans and models, which were refined into a final plan, implemented by the students themselves in the spring. The courtyard includes a sunken amphitheater, benches, trails, gentle earth berms, a pond, and significant tree plantings.

At Lovell Elementary, the architects spent extensive time in the classroom with the children, reworking the master site plan developed the previous year as well as designing smaller structures for the site. A model of the master plan was built. In addition, the architects developed a list of projects for the site, with brief descriptions of the suggested solutions, and left it with the teachers. This idea, they felt, would give the teachers the confidence to continue the projects on their own. They expected the teachers to select one or two for implementation currently, and would leave summaries of materials and instructions for the rest as a workbook for future seasons.

At Centerville Elementary, more detailed planning of the amphitheater proposed in the first year took place. A courtyard for student use was designed and construction was begun. A playlot with structures had been built the first year.

The design for the main entrance at Golden Lake Elementary was implemented, and a number of other site improvements were also begun, following the previously developed master plan.

The architects found that a two-year residence was ideal for developing and sustaining the interest of all those participating in the program. It allowed them to build momentum through the teachers and administration in the first year and maintain it during the second. The difficult task of dealing with six schools at one time, while forcing them to spread themselves thinner than they would have like, still let them stimulate spirit and enthusiasm among the participants.

Comment

Vogt/Close/Dunn:

Exposure to design aids in the de-
mystification of the profession, whi
in turn promotes a better understand
ing of it and increases the public
awareness of the need for good desig

It was a pleasure to see the kids ge
involved with design from day one, t
draw, build models, and finally con-
struct the real thing.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: ROBERT HURT		Hurt worked with the Research Historian of the Winona County Historical Society and with a museum educator and a city planner. The project was the development of a comprehensive "Cityscape" curriculum, which will be tested in a school system next year. Funds are being sought for this implementation, and interest has been expressed by a school system. At that stage Hurt and the planner will work jointly in the schools to test the curriculum and train teachers in its use.	

Resident/Site

Architect-in-Residence:

DAVID SACHS

KEY SCHOOL
South Jackson, Mississippi

Site: Suburban
Population: 467 students
43 faculty
Grade level: K - 6th

POWELL SCHOOL
Northwest Jackson, Miss.

Site: Urban
Population: 565 students
59 faculty
Grade level: K - 6th

In-School Coordinator:
Dr. HENRIETTE ALLEN

BAKER ELEMENTARY
Jackson, Mississippi

Site: Urban
Population: 336 students
28 faculty
Grade level: K - 6th

In-School Coordinator:
Miss EHRET, 4th - 6th
Gifted Program

SYKES ELEMENTARY
Jackson, Mississippi

Site: Urban
Population: 431 students
40 faculty
Grade level: K - 6th

In-School Coordinator
Mrs. BARBARA BARBER,
4th Grade "Gifted"
Teacher

Residency/Resources

This very complex residency included eight different elementary schools in Jackson. Sachs completed two ten-week periods with two schools each, one four week period at a single alternative school, and spent the last ten weeks of the year at three different schools, spending one morning and one afternoon at each. His total schedule for the week was two and a half days.

Faculty, parents, students and their siblings joined forces for several Saturday work days at various schools. Field trips were numerous: to architectural offices, historically significant buildings, a lumberyard with a very cooperative manager, an educational TV station, the Natchez Pilgrimage and Indian Village, the police department, and a construction site.

A landscape architect, a graphic designer, and the architect of a nearby building came to some of the schools to explain their job responsibilities and assist in projects.

Five architecture students from Mississippi State University worked with teams of children on a room design project.

Program

Sachs worked with gifted children, who spent one day a week in a separate classroom, in his first two-school residency. He began with blind walks in both schools, following up the walks by asking the children what they had used to orient themselves (materials, objects, forms, sounds, smells). They they drew route maps of the walks, placing the orientation clues in their proper location.

Architecture vocabulary was taught with a rating chart so the students could grade different spaces on a scale from light to dark, harsh to soft light, closed to open, friendly to unfriendly, etc. They learned, besides vocabulary, that a person's experience in a place affects his/her perception of that place, and that people may use certain words consistently themselves but often don't establish interpersonal definitions.

Sachs used the drives to and from field trip destinations to help the children learn about the city: patterns, growth, how individual buildings become part of the whole. The children visited architects' offices to learn what went on there, and analyzed the buildings they visited in terms of plumbing, structure and electrical systems and of vehicular, pedestrian or goods circulation.

A contest to design a sign for the school entrance at Powell led to a field trip to a lumber yard for materials. The manager explained the use, characteristics and origin of many kinds of wood, helped them decide how best to build the sign, and introduced them to almost all the construction materials in the store.

After much discussion and the evolution of a design for repainting the classroom at Key School, Sachs held a Saturday "work day" which involved 10 students, 15 siblings, 15 parents, and 5 volunteer architecture students. A picnic and plenty of supervised work not only almost finished the job, but also generated much healthy interaction.

At Sykes School, the AIS resident did an exchange project with a class taught by the Cleveland, Tennessee AIS resident, George Hasser. The children in both classes filled boxes with things they thought were descriptive of their own cities, preparing a description of why each object was included, and mailed the boxes to the other class. When the exchange box was received, they analyzed the contents in terms of "Why did they send this?" and "What does this tell us about the place where they live?"

The Sykes students were generally oriented by the teacher and the resident toward learning about history as shown in the environment. They did mapping exercises in which they went downtown and marked symbols for parking, green spaces, offices, retail stores, hotels, etc. On the same trip teams of children photographed signs of age, messages, people, and juxtapositions. Later, they selected a favorite building from the trip, wrote a paragraph on how it would feel to be that building; then they played 20 questions trying to guess each others' building. More photography came into later field trips when they visited historic sites and photographed details, memorabilia, and light.

The Baker students, meanwhile, were filming skits and information about L-5, a space colony they designed. They first observed films on space, built their own cardboard space capsules, and learned about videotaping. Comparisons were drawn between the trouble Columbus had obtaining financing and L-5's troubles, and between the lonely fears of the Jamestown colonists and of L-5 colonists.

During his brief residency at Davis, a new alternative school housed in an old, long-abandoned school building, Sachs helped the students identify a number of environmental needs after sensitizing them with awareness "games." Each class selected a project, plus some all-school projects (a soccer field, a school outdoor sign). Planting boxes, a privacy box, lofts, room rearrangements, were all moved along to a point where a Saturday work day, with 15 adults and 20 children helping, brought enought outside help so that the projects were largely finished by the end of the residency.

In his final ten-week period, Sachs worked at three schools. At Lester, his class of gifted fifth and sixth graders set themselves up as a design consulting body for the school - the "Room Zoomers." As they were studying their "clients," the library and a first grade, they learned a great deal about the complex role of an architect. Collecting and analyzing information, then responding to it, made a difficult lesson, but the students were able to accomplish several projects.

Both Rains and Lake students spent a great deal of time on photography, which included learning to develop, crop, print and enlarge prints. Exercises included attempting to capture the "spirit" of a person or place on film, as well as photographing an object three ways: objectively, subjectively, and expressionistically. In addition they redesigned a library and a classroom, building a bleacher-like "Storyland" for the one and a room divider for the other.

Comment

Sachs:

I'm learning that imposition of activi
on students must consider the interest
of students. I feel the "pulse" of th
class a most daily and adjust my empha
with respect to this input.

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: JOE BERCHENKO VALLEY VIEW JUNIOR Omaha, Nebraska Site: Surburban Population: 653 students 61 faculty Grade level: Middle In-School Coordinator: ED HOWE, 8th Grade Teacher	Berchenko worked three days a week at Valley View from September 1, 1977 to February 10, 1978. His residency was largely funded by the Humanities Education Materials Service, a Title IV program, channeled through the Nebraska Arts Council, to design curriculum materials to infuse art into humanities courses. He worked with the school's coordinator of the HEMS project to develop these materials. One field trip to a National Historic Landmark house was taken. A computer artist came as guest lecturer to the whole school.	Berchenko's residency achieved immediate high visibility through an all-school Egg Drop Contest. With three sheets of ordinary notebook paper, students were to create a container which would protect a raw egg when it was dropped ten feet onto a concrete pad. Tape was allowed, but was not to touch the egg. A duplicate container was also to be submitted because of the likelihood of the egg's breaking. The final rule was: "The winning entries will be selected not only on how well they do their jobs (although that is the primary consideration) but also on how nicely they're constructed. This means they should be simple and attractive. In the architectural world we call this ELEGANCE." One boy won both first and second prizes, another won third. The contest was featured in an article on the residency in the local paper. As Berchenko's drafting table was in the library, a main artery in the school, he was usually available to curious students. Many just wanted to ask questions, but others became involved in individual design projects. He felt the central location was an excellent way to make contact with students. Four mechanical drawing classes had lessons on "What an Architect Does." Then the AIS resident moved into a ninth grade design class to help them redesign the cafeteria. The process of measuring, building a scale model, analyzing the needs of the situation, and coming up with possible solutions fit very well into the curriculum; the teacher was very enthusiastic and plans to continue the process in future classes. An inservice program for teachers on Western Architecture was also received with enthusiasm. One English teacher felt that it lent background information to literature, was relevant to the curriculum, and was outstanding in every respect. The main thrust of the residency was to develop curriculum packets, under the HEMS program, for teachers in the humanities to use. Three packets were developed. "European Architecture," in six components, ranged from the Classical Period through modern architecture, with emphasis on the contribution made in each major country of Europe. Slides, commentary tapes, student study guides, quizzes, and suggestions for further research and reading made up each component. A second packet dealt with background information for those planning field trips to architecturally significant buildings in the Omaha area. The third packet was used as Berchenko's final activity. Two hundred and twenty eighth grade students played Cattleville, a game devised by Berchenko which was loosely based on a Forrest Wilson game. It was a simulation which recreates the development of a Midwestern cattle town. The AIS resident felt that both students and teachers participated with great enthusiasm.	A student: I learned how to get along with a lot of people playing the game. Also what you would make in the est. I thing this gam should be played by everyone; I enjoyed it very much. I did pretty good in cheating too.

Resident/Site

Architect-in-Residence:

ROBERT WARD

LINWOOD HIGH
Lebanon, New Hampshire

HANOVER STREET
Lebanon, New Hampshire

Site: Suburban
Population: 420 students
19 faculty
Grade level: Elementary

In-School Coordinator:
MIA PINE, Special Education Teacher

Residency/Resources

Ward worked sixty days in the Hanover Street School between September 1977 and May 1978. He spent fifteen days in the January through March period in Linwood High School.

The Hanover Street School staff and students raised a large sum of money for implementation of the playground plans with a talent show and a spaghetti supper. A professional photographer took pictures of the school and shared his expertise with the students involved in photographic documentation.

A visit by Joan Mondale to the school in support of the Artists-in-Schools program generated a great deal of interest and publicity.

The School Board unanimously approved the playground plans developed during the residency and provided some funds for implementation. Local businesses provided further services and materials.

Program

The chief focus of the residency at Hanover Street School was the design and building of playground improvements. Data gathering took place during the first two months, report writing followed, then review, survey and design in January and February. Final plan formulation and documentation through drawings, photography and models followed, and actual construction began in May and June. The project is due to be completed during the next school year in an extension.

Fifteen out of the school's seventeen classes participated in some way in the data gathering phase. Information was studied including types of trees, shrubs and other vegetation suitable for the area, weather testing - wind, temperature, and precipitation as well as solar orientation, vehicular and pedestrian traffic flow, and soil composition. A soil scientist was brought in to help with the testing of soils. Students developed a site plan, a circulation plan, and a parking plan.

The design phase continued with those students who had shown a very strong interest in the research phase. This group was broken down into three groups, who worked with Ward for one or two periods a week developing the design. As the plans progressed they called for swings, tunnels, towers and platforms, an amphitheater, and a quiet area which can be convereted to an ice skating rink. The School Board unanimously approved the design, and the residency has been extended until November to allow for completion of construction.

Comment

Site visitor:

(The principal) seemed very enthusiastic and supportive of the AIS program in his school. He felt strongly that this program gave the staff an "esprit de corps" that before was not apparent in the school. The staff rallied around the playgroun project and for the first time in twenty-five years raised money by having a spaghetti supper. He liked the idea that the AIS program can be an educational core where all curriculum subjects can be involved at the same time. He also felt that problem children can excel and gain confidence in their work while involved with the AIS program.

Resident/Site

Architect-in-Residence:

BETSY CAESAR

ETHEL MCKNIGHT ELEMENTARY
East Windsor, New Jersey

Site: Suburban
Population: 650 students
39 faculty
Grade level: K - 6th

In-School Coordinator:
MARY LEE FISHER, Unit Leader, K - 2nd Staff

State Consulting Architect:

MARTIN BECK, FAIA

Residency/Resources

This residency was from October through June, three days a week. The school offers seven different models of education ranging from tightly structured to experimental. Caesar worked exclusively with Model I, in which basic skills were used as a tool in a core curriculum based on drama, music, performing and visual arts. Model I had the added benefit of a great Project Unicorn, made by the New Jersey Department of Education with Title IV-C money. This provides funds for fourteen artists-in-residence over a three-year period, of which Caesar was the first.

There were 52 children, aged 5-10, three teachers, and an aide in Model I, and Caesar was involved closely with all of them. A theater group, a movement specialist and a filmmaker were the other artists-in-residence, who worked less regularly with the class. Parents were very interested in and closely involved with the school.

Additional funds for the playground project came from several sources, matched by the New Jersey Arts Council, a parents' plant sale, student fund-raising projects, and money from Project Unicorn. A local stone business donated slate, another business donated tires, and the Twin Rivers Development Corporation donated a fallen tree. The maintenance department of the school district provided special services in the form of workmen and machinery.

Caesar gave a workshop on space planning for all McKnight teachers at the end of the school year. The open, geodesic-dome design of the school had led to some difficulty in space allotments over the years; she helped them use the school plans to sort their spaces out. The half-time Model I teacher has secured a grant to work half-time with all teachers on space planning next year. Built environment education has become part of the curriculum, and model making is a much used procedure in the Model I class.

Program

The two main thrusts of the McKnight residency were to involve the children in redesigning their classroom through the process of problem-solving and to help the children in the design, conceptualization and realization of a playground improvement project.

Caesar arrived the first day with a list of very specific questions covering a range of information she needed to orient herself, such as resources, rules, structure, budget, etc. Having these issues clearly defined right from the start helped throughout the year. Her introduction to teachers and staff was informal. In her first days, children gave her a tour of the school and grounds, asked many questions, and solicited her help on specific projects. She brought in books, toys and games in response to their interests.

During this early period and all through the residency the AIS resident held discussions with the librarian, who was very interested in building a collection on the built environment.

To introduce the subject of space planning, Caesar asked the children to consider the difficulties they encountered in their classroom and write her letters about it. Their responses indicated a strong need for organization of furniture ("too many tables") and separation of functions. The room, formerly the cafeteria, was large with a high ceiling, but the spaces for the K-2 and 3-5 groups were ill-defined. Taking advantage of a smaller group of grades 3-5, not taken on a field trip, she made a sketch elevation of each wall and showed them how to measure the room. Others later joined the project, and a scale model of the room was built and furnished. The principal, on seeing the model, was so impressed that she insisted the children present it to the whole school.

The furniture rearrangement evolved from working with the model required the construction of tri-wall study carrels which would concentrate four student tables in the angles of an X shape. The students made these and, with careful training and planning, painted them neatly with designs. The whole process of making and using the model was then recreated on videotape.

After Christmas vacation the playground design began. A discussion convinced the group of children that preplanning must come before actual construction. They identified needs as: an inventory of existing play equipment; a list of architectural vocabulary words; a list of each child's favorite piece of equipment; and a list of the biggest problems each child experienced with the playground. The children developed one survey form for the K-2's and one for the 3-5's and polled the entire school for playground feelings and ideas. The Model I children then drew fantasy playgrounds; they were to design the most wonderful playground in the world without regard to cost.

The very creative results showed that the children regarded play as a process requiring systems. They evaluated the designs with their own playground in mind. Groups of children took observation sheets out to watch other classes at play; other groups reviewed a collection of books on playgrounds Caesar had brought in. With all this information the children did individual designs, then reviewed these. Bearing in mind the time and budget limitations and the fact that the construction process was to be largely done by the children, they agreed on an idea of linking together existing pieces of equipment with tire tunnels, balance beams, etc. The design was presented to the school's Site Committee by the children, then to the School Board. After a lengthy delay for review of the plans by the school board architects, and some trouble getting necessary materials, construction began the last few days of school. A backhoe and some maintenance men from the school district did the heaviest work, but the children did the major part. The entire process was documented with the help of a filmmaker-in-residence.

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Comment

(One fantasy playground) drawing has a wonderful looseness to it and to top it all off in the sky one finds private clouds . . . an art cloud, a TV cloud, and small clouds to be in if you just want to be alone.

63

Resident/Site	Residency/Resources	Program
Architect-in-Residence: WILLIAM MIKESELL ARTS HIGH Newark, New Jersey Site: Urban Population: 750 students Grade level: Secondary In-School Coordinator: CONNIE HANSEN, Art Teacher State Consulting Architect: MARTIN BECK	Mikesell worked at the school from November 1, 1977 to June 15, 1978, three days per week. Arts High School is an art deco building designed as an art college in the 30's. The students come from all over the city, after passing an entrance examination, for a college preparatory course geared toward art and music. An environmental education program had been operated since 1974 by architecture students from the New Jersey Institute of Technology. Mikesell was able to use the slide collections and library of the School of Architecture to present lectures on architecture, and faculty members of that school offered to trade lectures so that the Arts High students could receive a broader education on the built environment. The Newark Chamber of Commerce provided some funding for the residency. A paint manufacturer donated 20 gallons of paint; other materials were donated also. Field trips to many areas of the city were a strong part of the curriculum. The arts reporter from a local paper offered close coverage for the program, thus positively reinforcing the students' interest and providing information coverage for parents and the general public. The residency is to continue for another year.	Initially, Mikesell observed in classrooms to get a feel for faculty techniques. He then gave some presentations of his own work, both as an AIS resident and professionally, to the classes he would be working with. Films on the city of Newark and the reasons for his interest in it were also part of the introductory period. Almost immediately a group of photography students were sent to record the Newark built environment. They divided into interest groups such as housing, transportation, recreation and parks, ethnic groups, manufacturing, architecture, and institutions. The students were motivated by the possibility that their photographs might be used as an exhibit or a publication. They explored parts of the city and recorded life styles they had never seen before. At the mid-point of the project, they collected their work into a small exhibition to get an overview of what had been done. Many of them felt at this time that they had concentrated too much on the seedy aspects of Newark and needed to work on the positive aspects. During the rest of the year, they continued to go through a series of assignments with reviews until their work was sophisticated enough to be assembled in the form of a publication called Newark. Their regular art teacher was much involved in this production. Another photography and graphics class took photos of a specific downtown street and abstrated their visual impressions into a large papier mache model of the street. Buildings, people, newsstands, vehicles, were all included. The model was shown as part of the photography exhibit at mid-year. This exhibit was used to involve the rest of the student body in built environment education. Groups came in to view the exhibit and see a film on Newark in the 1920's, then were given paper to record their impressions and to draw maps of city neighborhoods. A running talk was presented pointing out the dramatic changes in the city over the years, and the students were also asked to react to them. An English class was asked to write themes describing their neighborhoods, size of buildings, mix of stores with housing, where the children play, and if there was space for growing flowers and vegetables.

A project that evolved with great difficulty was a mural and mirror in the graffiti-scrawled men's room. The five students involved, although not very sophisticated in art ability, did follow the design process faithfully, and the work was eventually completed. Other students, however, disrupted the work and caused trouble enough to get the project temporarily halted after a paint-spilling fight.

A visible project in the hallway solved the problems of too many army-green lockers, not enough bulk storage space, and no display areas all at once. Two banks of lockers were removed, leaving only a few which were concealing eyesores. Some seniors designed excellent murals of a sunset and clouds on color bands, which were painted on both walls and lockers after other students had prepared the surface. Some students, with considerable difficulty, designed display cabinets which could be easily constructed. With help from some students over Easter vacation, the cases were built, and the murals have been extended to incorporate these.

One other project was the space planning of the very disorganized graphic arts room. Using a model, the teacher was able to work with the AIS on a rearrangement using recycled furniture which worked far more efficiently.

Comment

The AIS resident was able to use the city's environment as a positive resource despite the difficulties Newark has been encountering over the past years with blight and poverty.

Resident/Site	Residency/Resources	Program
Architect-in-Residence: JOHN WINCKELMANN NORTH BERGEN HIGH North Bergen, New Jersey Site: Urban Population: 2800 students 150 faculty Grade level: 9th - 12th In-School Coordinator: NICKALAS LAROSE, Art Teacher State Consulting Architect: MARTIN BECK, FAIA	This residency extended from October 21 until the end of the school year. The architect-in-residence worked four full days a week, largely with art classes. Businesses in the community donated materials, such as cardboard, for projects. The local planning department offered maps and related information.	Despite the inertia present in a large, overcrowded high school plagued by vandalism, the AIS program managed to produce a considerable amount of environmental impact. Working almost entirely with art classes, Winckelmann went through a series of acitivites designed to build on each other: exploration with the senses, dialogues on place and scale, mapping, scoring, etc. Then three different groups of students worked on mural projects. Part of a painting class worked with shadow figures to transform a dismal corridor. One wall showed a dancing figure in progressive steps of color graduations. On the opposite wall the students painted themselves in the act of painting a mural, by way of a signature. The first mural initially attracted a great deal of graffiti - which attracted a great deal of attention. The graffiti problem was frustrating, but gradually the incidence decreased and then ceased. Other murals with related palettes were done in the hallway outside the art classrooms. Plans are underway and designs have evolved for murals to be painted next year in the elevator lobbies of a senior citizens' housing project. In discussing the general environment of the school, the class agreed on the difficulty of knowing what and where everything is in such a large building. The disucssion led to a project involving graphics and signs. As an introduction to typography a logo project was assigned: Winckelmann brought in type catalogs and logo examples and the students worked on individual designs. The classes then designed and made very professional-looking Plexiglas signs. The resident felt that the students were amazed that they could produce something "real," and that the highly visible results were a good way to advertise the AIS program. Response from faculty and students was extremely positive, and the requests for more signs kept coming Two other highly visible projects were temporary in the nature of the product, but designed to heighten awareness in the general school population. For Field Day (a day-long series of events and activities) Winckelmann had the art class build a maze. They began by studying examples, then designed two-dimensional mazes, and finally designed and built a very large three-dimensional maze of 4' x 8' sheets of corrugated cardboar On Field Day the maze was used as an event, with teams of students timed going through it. Afterwards, it was opened to the general school population, and a great many students experienced it before it succumbed to the general exuberance and was destroyed.

Finally, an exhibit of work by an honors art class was turned into an exercise in spatial organization, circulation and lighting, as well as display. Stage craft and audio-visual students were also involved. Display panels and partitions were constructed and organized according to criteria for circulation and sight lines, different arrangements were tried and evaluated, and the final one was chosen. The finished show attracted a great deal of attention. Winckelmann felt that this type of event made a good AIS project because a great deal of work and preparation builds towards a deadline, and the anticipation encourages enthusiastic cooperation. The success or failure of the work can be readily determined, and a post-event evaluation can add more to the learning process.

Comment

Winckelmann:

In doing the murals, I found the students reluctant to sketch or explore ideas; the first idea that comes to mind is the one they want to execute. Students were anxious to get right into the painting, even if they lacked the technical skills necessary to carry out the idea.

Resident/Site

Architect-in-Residence:

JERRY OHSFELDT

CENTRAL ELEMENTARY
Las Cruces, New Mexico

Site: Urban
Population: 424 students
29 faculty
Grade level: K - 6th

In-School Coordinator:
DICK SCHRIVER, Principal

VALLEY VIEW ELEMENTARY
Las Cruces, New Mexico

Site: Urban
Population: 600 students
36 faculty
Grade level: K - 6th

In-School Coordinator:
JERRY BURGESS

Project Coordinator:

MARY JANE WOOD

Residency/Resources

Ohsfeldt worked for nine months, twenty hours per week. This was his second year at the two schools. At Central he worked with grades 3 through 6, at Valley View with grades 4 through 6.

Program

Several projects carried over from the first year at these two schools. The supergraphics begun at Central were finished and augmented by six display boards with graphic symbols. The landscaping plan developed at Valley View was carried out. The children worked on the landscaping where possible and took field trips to learn more about it. Forms were built, concrete poured, trees and grass planted, and irrigation equipment installed.

The building of private spaces took place in several classrooms. A fifth grade made a six-space study carrel of tri-wall which fit on top of their work tables to divide the space. In addition, they built tri-wall cubes, reinforced by an inner construction of 2x2's, for storage and seating. A sixth grade, after a class contest on how to construct a pentagon with a compass, used their ability to build a decahedron to serve as a personal reading space. One teacher, with design help from the resident, built a loft with a lower private space, a larger intermediate level, and a high space.

A fourth/fifth grade classroom had a problem with the afternoon sun and heat load. Ohsfeldt helped the students decide that painted panels, covering the top 2/3 of the windows, would shade the room. The 18-member class split into teams of three to work, first making individual designs, then selecting one and painting the panel. The teacher intends to make this an annual project so that each class can do its own mural.

Ohsfeldt recycled a number of cafeteria tables from the storehouse and, with a teacher, created a portable stage with them by sawing the legs to 20" and using connectors. Other schools may follow this example.

Central Elementary was having trouble finding space to house its 2-hour per week special programs. Students and teachers worked with the resident to develop a concept of time/space use of the corridors which resulted in the creation of six teaching stations utilizing corridor space effectively. This concept also will be used by other schools.

For a third grade project in house design, Ohsfeldt made a building materials kit. This contained samples of concrete, brick, 2x4's, pvc pipe, insulation, shingles, gypsum board, etc. He found the kit very useful in working with the students.

Comment

Ohsfeldt:

It is the opinion of the AIS resident that the program was very effective. Teachers, administrators, students and an architect were exposed to new ideas, language, problems, systems, and life styles. We tried a lot of new things in the last two years; some worked and some didn't, but we had fun and learned.

The time period of two years was right for me - it took two years to get some activities completed. However, I felt a lack of the beginning excitement at the end.

Resident/Site

hitect-in-Residence:

N ANDERSON

RGE WASHINGTON SCHOOL
te Plains, New York

e: Suburban
ulation: 300 students
20 faculty
de level: K - 6th

-School Coordinator:
EPHINE BRACKEN,
Art Teacher

EDALE SCHOOL
te Plains, New York

e: Suburban
ulation: 300 students
20 faculty
de level: K - 6th

-School Coordinator:
RNICE STEINMAN,
Art Teacher

oject Coordinator:

NALD TOPPING

Residency/Resources

Anderson spent approximately three hours a week at each school in this second-year residency, with more time at George Washington during the construction phase. The architect worked in the schools from October to June.

A number of volunteers and specialists from the community were brought into the program where possible. A survey was made to get the community's input into certain design decisions at the George Washington School program. Various community groups donated materials to the projects.

Anderson made a presentation and slide show to the Westchester Mid-Hudson Chapter of the AIA and to a joint meeting of the New York State Association of Architects and the Royal Institute of British Architects.

Another architect, an interior designer, and skilled carpenters were used as outside consultants.

Additional funding came from the New York Council on the Arts, the Westchester Council for the Arts, and the schools in the program.

Specific inservice teacher training sessions were held before each of the major phases of the architectural process. Informal training occurred at teacher conferences before and/or after each session. The ISC was at every session; the Artists-in-Schools Coordinators visited once a month and were directly involved in the program.

The Parks and Recreation Department cooperated in the playground redesign at George Washington School.

Program

Anderson was in his second year at Rosedale Elementary School. Some projects were carried over from the previous year; both the architect and the principal now feel that completion in one year gives children more sense of ownership of the project. Sixth graders were involved in the design and construction of a lobby renovation with carpeted benches and hanging plants, a sculpture garden, a two-level study loft, and an overnight shelter in the woods surrounding the school. The students learned to use hand tools effectively and safely in addition to following the design process from start to finish.

The very committed and enthusiastic principal at Rosedale analyzed his own environment from the children's point of view and decided not only to change the location of his office, but also to lower the counters in the main office so that children could see over them. He felt that this would make the offices more approachable and inviting to the students.

At George Washington School, Anderson worked with grades 3, 4, 5 and 6 plus a special education class of learning-disabled children. The main thrust was a major redesign of the playground to be more useful to both the school and the community. An introductory session invited the students to analyze their immediate environment and point up the steps involved in modifying the built environment. As illustrations of this process the architect used slides, plans, and models of various-sized construction projects. As he noticed more interest on the part of the boys, Anderson made a point of involving his partner, a woman, in a number of later sessions. He also found that the learning-disabled children benefitted more if a little advance work was done with them before the regular session.

The teachers were given detailed lesson plans with objectives, lesson plan, aids and materials list, assignments (for students and teachers) and plans for the next session. Because of the brevity of the architect's time in the school each week, teachers learned to expect to carry on the work between his visits.

The children surveyed and mapped their neighborhood with all its good and bad points, coming up with a strongly felt need for better recreation space. They made scale drawings of their own rooms at home to learn about plans, then studied site plans of the immediate school area. New terms such as orientation, drainage patterns, topography, prevailing winds, microclimate, and access were introduced; slides of other playgrounds and parks were shown. The site analysis went on for several weeks, culminating in the building of foam-core site models. During this period input from neighbors in the community was sought.

The design phase began with the children deciding which part of the program they wanted to work on and thinking up ideas for them. Third and fourth graders worked on the "tot lot," while older children designed parts of the main playground. These designs were modified until they were in final form; areas were staked out, and hand tools were introduced.

During the construction phase the learning-disabled children showed remarkable involvement and ability. All children were involved in teams, the safe use of hand tools was taught, and all had an in-depth experience.

A presentation program for children, parents, and neighbors capped the year. The careful choosing of schools to be served, and the strong commitment of the principals and teachers were major factors in the productiveness of these residencies.

Comment

Anderson:

As there was less of me to go around the second year, I spent more time teaching teachers and less time teaching kids. The teachers were forced to try to learn more about teaching architecture and to rely less heavily on me. So perhaps in the long run they will retain more of the skills involved, as they had to do most of the work themselves.

It is best to finish up the product of your program by the end of the year, if at all possible, rather than carry it on into the following year, as the sense of ownership is much greater when children and teachers are involved from the very start of the project to its completion.

Resident/Site

Architects-in-Residence:

LINDA FRITZ
MELANIE MURPHY

PAINTED POST MIDDLE
Painted Post, New York

Site: Rural
Population: 520 students
36 faculty
Grade level: 6th - 8th

In-School Coordinator:
JOHN VINE, Principal

Project Coordinator:

CHARLENE HOLLAND

Residency/Resources

This was Fritz's second year at Painted Post but Murphy's first. The residency ran from January to June, three days a week. The seventh grade classes were the primary group involved.

A preplanning workshop was held in December, with the result that the principal set aside one full day in January as a work day, hiring substitutes to free the teachers to plan with the residents.

Field trips were a large part of the semester, including a major all-day trip to Rochester. In this tour many city agencies, architects, and private citizens contributed their time to meet with students.

An Australian graduate student in the landscape architecture program at Cornell gave a presentation o the design of zoos. Cornell University provided materials, information, a dio-visuals and consultants from many departments. A number of Cornell archit cture students participated as volunteers.

Additional funding came from Corning Glass, Chemung County Financial Institutions, the Chemung County Arts Council, and funds through BOCES. A mini-grant from the Painted Post District Superintendent's Fund paid for the field trips.

With Carol Goldstein the residents held several training workshops: at the Chemung Valley Arts Council (for art teachers), at the N.Y. State Art Teachers annual meeting in Syracuse, and at the ASCA meeting in New York City.

Program

Building on an already-established working relationship with the teachers, the residents planned a well-organized outline of activities. Scheduling difficulties delayed parts of the program, particularly the Rochester trip, so that the entire plan was not accomplished, but the residents felt the students had learned a lot from what they did.

Initially, the students filled out a questionnaire for the residents, describing their homes and interests. Few of them, it turned out, had ever visited a city. Next, a "mental mapping" exercise helped the students visualize carefully their routes to school. Later, the students drew maps of the school in the same way, simply drawing on memory alone.

With a social studies teacher, Murphy had the students do research on the history of the school in the community. They interviewed teachers who had taught there for a long time, and parents or grandparents who had attended the same school. Looking up stories about the school in the archives of the local paper gave a wider perspective. They wrote up their reports and interviews, including old photographs and drawings, and gave presentations to the classes.

For four weeks, Fritz worked with five design teams from science classes on a school grounds design project. After photographing existing conditions and taking suggestions, they evolved designs which were presented as plans, details, and rationale. The emphasis was on the combination of built and natural environment in the outdoors, and the evaluation of this in terms of use and aesthetics.

In the introduction of a new environmental concept, the students went on a series of field trips illustrating the rural to urban spectrum. First busses took them on an all-morning tour of the surrounding rural area. This trip was particularly enlightening for the teachers, who were not familiar with all the areas where their students lived. The students, working in teams of two or three, filled in a land use matrix to keep track of what they saw. These were later discussed in class, and the route was traced on USCS maps.

The next environment, the small town, was explored on foot. Students explored Painted Post, seeing examples of different land uses and architectural styles. After the tour, the students mapped the town using landmarks identifiable to a stranger, and disucssed land use as compared to the concept of space bubbles.

The final trip, to Rochester, was the highlight of the spring. Two class sessions on architectural styles and two on Rochester itself prepared the group, and each student chose one of three "tour packages" offered. One hundred students, four teachers, and twelve Cornell graduate students in architecture took three school busses. Each tour did five similar activities: visited a city office involved with the physical development of the city; talked with a representative of a citizen's group interested in the city's built environment issues, took a walking tour of a section of the city, visited examples of historic preservation or adaptive reuse, and visited the office of an architect involved in the city's built environment. Within each tour group, the students were assigned to be "Preservation Planners," "Architects," "Artists," "Business People," "Transportation Planners," "Landscape Architects," "Planners," "Environmentalists," or "Photo-Journalists." They were given sheets listing questions to ask and answer, and observations to make, in that role. The trip was a rousing success.

A special guest lecturer, an Australian graduate student in landscape architecture at Cornell, gave a presentation on designing built environments for animals - zoos. He discussed territoriality, animal's space bubbles, use of materials to simulate the natural habitat, etc. The students enjoyed the lecture.

Comment

Fritz/Murphy:

I believe a few ideas stuck - and i
nothing else, we demonstrated to (t
teachers) that there are innumerabl
outside resources that should be us
the schools and that there may be v
for teachers and students in partic
pating in this type of project, a n
that all the teachers were initiall
very skeptical about.

Resident on the field trip to Roche

Everyone, teachers included, felt th
was a most successful field trip.
was well organized, the kids were pr
to participate, ask questions, and
record impressions, and nobody got s
on the bus!

Resident/Site	Residency/Resources	Program
Architect-in-Residence: CAROL GOLDSTEIN PARLEY COBURN Elmira, New York Site: Urban Population: 500 students 30 faculty Grade level: K-9th In-School Coordinator: GEORGE TRAMONTIN, Principal	This was a second-year residency at the same site. Goldstein worked approximately two days a week from October to June, with primary emphasis on grades 7-9 plus some work with an ungraded 4-6 class. The town of Elmira was used extensively as a laboratory for learning. There were discovery tours of neighborhoods and of the nearby Cornell campus. Cornell University provided a rich resource, as at the Corning/Painted Post residency. Goldstein was able to use materials, information, audio-visuals, and people from the university. In addition, she, along with Fritz, Murphy, and Professor Stuart Stein, offered a workshop course in built environment education to graduate students with a view to providing expansion and continuity in the program. She also collaborated with Fritz and Murphy in presenting workshops for art teachers at the Chemung Valley Arts Council and at the New York State Art Teachers Association annual meeting. Outside consultants included a television weatherman, an insulation expert, and architects from Cornell who specialized in solar energy. Students raised money through pizza and bake sales to publish a book about Elmira and to help save the Arnot Art Museum's columns. Goldstein lectured on the AIS program's relationship to community education in preservation to the Cornell/National Trust for Historic Preservation Summer Institute.	In keeping with Goldstein's interest in historic preservation, a large number of the residency activities were oriented toward architectural history and local architecture. She did units in a 6th grade and in a 9th grade class on Greek architecture, focussing on the culture which produced it, and followed up by teaching about Greek revival architecture and about current city planning ideas derived from the Greeks. With the 6th grade this study of the Greek revival grew into a student campaign to raise money to repair and restore the columns on the front of the local art museum. They hung posters in downtown windows and had an exhibit in a downtown bank lobby. "Tom Sawyer Week" led to a presentation on cities and growth along rivers, and on architecture of the riverboat period. A social studies unit on the Gilded Age discussed, through slides and contemporary documents, lifestyles, architecture, transportation, urban growth, etc. in that period. The 7th graders studying the Gilded Age went on to research topics relating to Elmira's history, much of which lay in that period. They took walking and bus tours, interviewed long-time residents, looked up histories of buildings. This resulted in a book written by the students, Elmira! You Help Build It, "publication made possible through 7th grade pizza sales and a matching grant from the National Endowment for the Arts' Architects-in-Schools program." Another history class heard presentations on urban growth, how geography affects architecture and culture, architecture as a cultural indicator, etc. A unit on solar energy involved the use of guest professionals as well as field trips. The entire field of energy, including individual consumption, was explored in some depth. Another science class made a relief model of the Elmira area, discussing flooding implications (the area experienced severe flooding in 1972), urban growth, and land use planning in the Chemung area. Remedial classes had special projects. Math students, learning how to use a ruler, measured the classroom, mapped it on 1" graph paper and, in teams, redesigned the room and its functions. Reading students who had difficulty with signs, symbols and charts studied aerial photography, map making and map reading, learning to map their own neighborhoods with symbols. A major project for an English class involved a "penpal" class in California. Students wrote, directed, filmed and narrated a videotape on what it is like to live in Elmira and go to their school. They had corresponded with the California class in the fall; the videotape was a production of the spring.

A takeoff for a health class was a three part unit on urban health. Energy, environmental architecture, land use, visual pollution, recycling of urban resources were among the issues discussed.

Art classes were given two projects. Ninth graders designed a logo and signage for the community center in a wing of the school as a study in graphic design. And 8th graders, also in graphic design, became totally absorbed in an enormous mural covering four 125 foot walls in the 1st floor hallways. The students worked during class, study halls, lunch period, and after school. More murals are planned for next year.

Teachers in surrounding communities often heard of the AIS residency and requested discovery tours. Goldstein interested a broad spectrum of people in built environment education in this way.

Comment

Goldstein:

The second year was gratifying in a completely different was from the first. There was a larger spinoff effect than I would ever have expected. Teachers developed their own versions of last year's materials, and would casually ask me for a certain resource I had introduced last time; students applied skills to new problems, conceptually, as well as manually . . . in general there was a certain confidence in the air that implied a greater familiarity with the issues, methods, and ideas I had brought to the school initially.

I also should admit that the biggest surprise for me was the tidal wave of publicity internally and in the community that resulted from the simple use of approximately 5% of my residency, incalculable student labor hours, and $60 worth of latex enamel semi-gloss in the hallways of the school. Throughout my residency I had discounted the Product as Goal, but this project happened, as did all others, at teacher and student request, so I went with it, and it took off! One can forget, while on the inside, how progressive a concept environmental psychology is.

Resident/Site	Residency/Resources	Program	Comment
rchitect-in-Residence: ATTHEW KROIN EORGE WASHINGTON ELEMENTARY hite Plains, New York ite: Suburban opulation: 285 students 15 faculty rade level: K - 6th n-School Coordinator OSEPHINE BRACKEN, Art Teacher	Kroin worked with kindergarten through second grade, and with one ungraded special education class. His residency extended from September 28, 1977, to May 31, 1978, during which time he worked a total of 20 half days, or 60 hours. The White Plains Board of Education has been supportive of the program in all schools and at all levels.	Kroin met with the teachers who would be involved with his program and gave them a brief history of architecture, a slide show of work from his office, and an explanation of the design process. His introduction to the students was a half hour spent with each class separately. He brought a large sign which said "Mr Kroin - Architect-in-Residence," explaining that this was his office away from the office and that he would always bring it to class. After talking for a few minutes about what an architect is, he went into the story of Adam and Matthew, children of an actual family who were clients in his office. He told them that Adam's mother wanted a larger kitchen and a place to eat with nice views, Adam's father needed a place to work or read where the family noise would not reach him, and that Adam and Matthew wanted a big playroom. The children responded eagerly with needs and wants for all these standards. Kroin told how, after learning all this, he would go back to the office and make drawings, but that some people couldn't understand the drawings. Reaching into a large "mystery bag" he had brought, he pulled out a scale model of a house to pass around. When the question of how the house got built came up, he pulled out a set of working drawings to show. He finished up with a brief slide show of several types of buildings. The children were very responsive, and Kroin changed the pace of the lesson often to hold their interest. With all his classes, the architect used the same basic project. The children learned to measure the classroom both with rulers and by pacing, and to transfer the measurements to a grid. They inventoried the contents of the class and experimented with different arrangements both on paper and in fact. The functions of different arrangements were discussed. The children practiced being columns and beams or chairs and tables themselves when structure or furniture arrangement was the subject. Some classes made scale models of the classroom. The children began to grasp the difference between two and three dimensions and learned to read a plan. With the special education class the architect was able to go somewhat further. They participated in a brief study of different types of shelter, learned a bit about heating and plumbing, and built models of a previously designed house. Their final activity was the construction and painting of a "Special Space" for their classroom.	Kroin: There are a few real "stars" in the two second grade classes. Interestingly they are children who do not excel academically in any other area. The two brothers have completely on their own drawn to scale drawings of the school and their home. Also, a stutterer is so motivated he does not stutter in this class, walks with a swagger (self-confident) and might be coming out of his shell. It is not all peaches and cream, however, as one girl, usually a star, is having her problems. Teaching is work. . . Wow it is work!

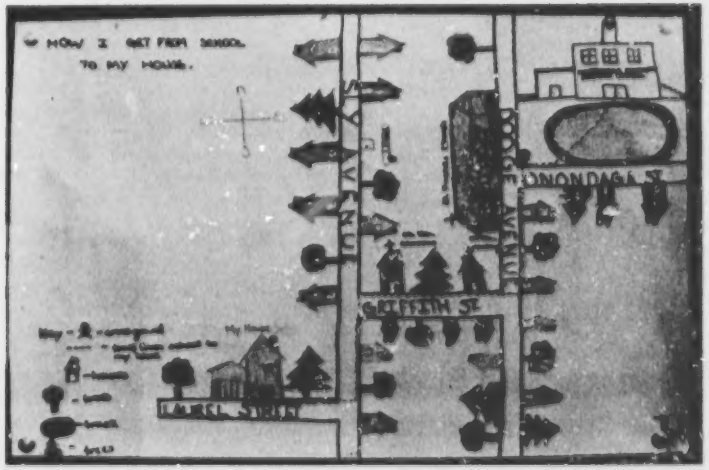
Resident/Site	Residency/Resources	Program
Architect-in-Residence: JOHN MEFFERT NORTHSIDE/BLODGETT MIDDLE Corning, New York Population: 650 students 40 faculty Grade level: 6th - 8th In-School Coordinator: THOMAS MADIGAN, Principal Project Coordinator: CHARLENE HOLLAND	This residency was an extension of Meffert's stay in the school in spring 1977. He worked two and a half days a week from October 1, 1977, to January 31, 1978. The residency was closely coordinated with those in Painted Post and Elmira, and, like them, used Cornell University extensively as a resource. Meffert worked with sixth and eighth grade classes directly, and did extensive planning with seventh grade teachers so that they could use the program on their own. He focussed on leaving a collection of built environment education materials and maps in the library as a major resource. In addition, he left a list of supportive AIA members who offered to be consultants with the teachers. A workshop course at Cornell, given by Meffert, Goldstein, and Fritz, will encourage architecture students to work in the schools. Students made a presentation to the PTA of their plans to renovate the student commons, resulting in a commitment by the PTA to provide resources and help for the project.	Meffert held planning sessions with teachers for the first two weeks to work on the scope and kinds of projects to be developed. He worked initially for two months with sixth grade teachers on projects relating to their world cultures curriculum. The teachers were particularly concerned that the projects would help them deal with attitudinal and behavioral problems, while Meffert was also interested in relating to the school's fiftieth birthday. From this information they designed projects focussing on specific skill areas: Mapping and orientation, organization and research, and the ideas who, what, where, why, when, how. Twelve ideas were developed, and each class was given a choice of three to insure student enthusiasm. A sixth grade social studies class did a project on House Form and Culture. Working in teams of two and beginning with simple matrix sheets and work sheets, they prepared reports, floor plans, elevations, and built models for a presentation before the class. Another social studies class, an underachieving, poorly motivated group, did a study of Market Street. They toured the street with the director of the Market Street Restoration Agency, learning about the history and problems of the area. Back in the classroom they worked on a survey exercise called Adopt a Building; each child was responsible for interviewing and learning the history of one building. In class they developed a survey sheet, and in English class worked on interviewing techniques. Meffert prepared the store owners in one block, and in teams of two, the students interviewed them. From the survey they prepared a land use map, built a scale model of the street using elevation drawings, obtained from the urban renewal agency, and finally attended a public hearing on problems and solutions for their block. Yet another sixth grade class researched the history of the school for a birthday week display, interviewing alumni and collecting artifacts. Alumni, parents, and school board members visited the display. A class of above average students worked on reusing the student commons, a space long abandoned and used only for storage. The teacher felt the class could handle a project that stood outside their curriculum. The prepared floor plans, elevations, and a model, and developed and implemented a school-wide survey. Plans were made of alternate solutions, and the students made a presentation to school administrators, teachers, parents, and other students. This stimulated PTA commitment to providing the necessary resources, a gratifying culmination for the resident's work.

With eighth grade health classes Meffert worked on a continuation of the barrier-free environments project begun in the spring. One group photographed barriers and solutions downtown for display panels in store windows. Another group completed a video movie on the problems of being handicapped in the school. Teacher and students were able to complete both activities with advice and encouragement from the AIS resident.

Career guidance appeared not only in a special session on architecture as a career, but also in weekly sessions with thirty students (in groups of fifteen) who met during the lunchhour to learn the basics of architecture.

Using the local community as a focus, a team of sixty eighth grade students described, documented, and identified the specific aspects of their personal environemnts as well as the community at large. The project, done under a contract system, coordinated different curriculum areas such as English, American history, social studies, and art. Field trips, oral history, landmark identification, along with filling out New York State survey forms on their own homes, were among the options open to the class.

A strong emphasis on teacher training, planning and working with teachers for the present and the future, and resource collection or identification ensures continuity for the program in this residency.



Comment

Meffert:

Initially, the school had no expectations of the program other than that it was another frill which would hamper basic educational objectives. This notion was dispelled in the spring residency, so that a firm foundation had been laid for effective participation for the fall 1977 residency. The most important activity in developing firm relationships between myself and the teachers was timely planning for different projects with projects geared to teachers' specific objectives. This planning phase cannot be over-emphasized as the keystone of a successful residency.

Projects developed in response to teacher concerns, with planning and implementation centered on the teachers' own resources and abilities, proved the most effective and will, I think, become part of each teacher's experience to be used into the future.

Resident/Site	Residency/Resources	Program
Architect-in-Residence KENNETH NARVA CHURCH STREET ELEMENTARY White Plains, New York Site: Surburban Grade level: K-6 In-School Coordinator: JAN MCEVOY, Art Teacher Project Coordinator: RONALD TOPPING	Narva worked from November 8, 1977, to May 25, 1978. He spent four to five sessions of ninety minutes each per month at the school. One first grade, one third grade, two fourth grades, and two sixth grades were involved in the program by choice of the teachers. The Board of Education has fully supported the program at all levels and will fund the program for its third year. Parents were involved in most classes as aides, particularly when construction was taking place.	As an entry activity, Narva had a meeting with the teachers involved in the program. He gave a short review of the history of architecture followed by a slide show of his firm's work. This included varied designs such as retail stores, office buildings, and multifamily housing. He described in some detail the elements which affected the design development in each case, stressing the fact that no matter how large or small the project might be, the steps taken are basically the same. An assignment was given to the teachers: to lay out the furniture (cutouts furnished by the architect) on a scale drawing of an efficiency apartment. To introduce himself to the children, Narva made a similar 30-minute presentation in each class, varying his approach with the age level. He had a 30 foot-long drawing which was a graphic presentation of his name, program, school, function, role, etc. Also demonstrated were such instruments as triangles, rulers, T-squares, some working drawings of an actual project, scale models of the same, and slides of work done by his office. He asked and answered many questions and explained what they would all try to accomplish together. The slides were used to demonstrate the design/build process. The children were given short awareness exercises to do before the next session, such as listing the different kinds of buildings between home and school, or drawing an elevation of their homes showing what makes each one unique. Narva worked consecutively with two classes at a time. For each session he prepared a lesson plan, with a copy to the ISC, detailing tools and equipment needed, preparation by himself and by the teachers, goals, and observations. The third and fourth grade classes were introduced to structure as a start in creating "My Place." The children each designed a place and later re-drew them to larger scale on cardboard sheets. The children, in teams of two, constructed the places out of the cardboard, learning the difference between two and three dimensions as they worked. The architect remarked that student participation was tremendous; their enthusiasm was so great that the discipline of measuring, counting and drawing were easily accepted by all. Parent aides were a great help. After the "places" were painted, the children arranged them in various ways on the gym floor, learning about exterior spaces created by placing the buildings in random or planned ways. Every class in the school was invited to visit while the children explained and demonstrated what they had built. A final activity had the children write down and read to each other their thoughts on the project.

Another class designed and built mazes using the same principles. First graders learned about column and beam construction, then used their knowledge to draw fantasy playgrounds.

A sixth grade class reorganized its classroom and created an activity center. Using the process of analysis, design development, construction, and evaluation, they began by taking inventory. A scale drawing with furniture cutouts was made, and teams of three children were given a week to draw up a new layout, with an activity center which could not be more than 20% of the area. The teams made presentations of their schemes with constructive criticism from other teams, and a combination of all designs was put together. The classroom teacher was very enthusiastic, as were the children. The teams finished up by using the same process to design the activity center.

Throughout the year the in-school coordinator was a major factor in the success of the program, acting with great supportiveness.

Comment

Narva:

As I learned during my 5 weeks with one class, it often would have been more expedient and even easier to do the work myself, but nowhere near as rewarding for the children. Child participation is a must. It is the best way for them to learn and experience things.

ISC:

Difficult children became helpers . . . bored children were lively and interested . . . where a class had arguments among themsleves, there was a new team spirit.

Children in our shcool were able to follo up interests they had in any project by working in art studio, designing rooms out of cardboard boxes, building cities out of wood. Individual projects are necessary for those children who are turned on by the program.

Resident/Site	Residency/Resources	Program
Architect-in-Residence: FRANK SANTILLO BATTLE HILL ELEMENTARY White Plains, New York CHURCH STREET White Plains, New York Site: Suburban Grade level: K - 6th In-School Coordinator: JAN MCEVOY, Art Teacher MAMARONECK AVENUE White Plains, New York Site: Suburban Grade level: K - 6th In-School Coordinator: JACK ROACH Project Coordinator: RONALD TOPPING	Santillo worked at three different schools; at Church Street Elementary from November 16, 1977 to June 1978, at Mamaroneck Avenue from September 21 to June, and briefly at Battle Hill from September 20 to November 16, 1977. This was the second year of Santillo's residency at Mamaroneck Avenue. At Battle Hill he worked with groups of gifted children who came to the school on a rotating basis, and at the two other schools with teachers requesting His services. Parents were involved in a number of construction efforts in many classrooms in all three schools.	The project at Battle Hill School was turning a room into an art and music room for the use of gifted students who came from all over the school district. Different teams of students designed murals, beginning with careful sketches done reasonably to proportion with dark lines. On these they could use overlays to work out the colors and designs. This part of the project was taken over by the teachers while the architect helped them design a platform to be built across the entire room. The students worked out the lumber list and costs and ordered materials. On the construction day about fifty-three students participated, in groups of fifteen to twenty at different times. In one and a half days, due to careful organization the entire platform was assembled. It was designed to be disassembled and moved if necessary. Much emphasis was placed on the proper use of power and hand tools. With several first and second grades at Mamaroneck Avenue School, Santillo discussed fantasy rooms, special places, and rooms of the future. Some of these classes carried through by building spaces with boxes, cardboard tubes, and styrofoam. A fourth grade learned about Western framing, building models with footings, studs, joists, floors, walls, and roofs in imitation of the way most wooden houses are built. The major project at Mamaroneck was done with a selected group of third and fourth graders. This was a large two-level construction in the library under a skylight. Students built their own scale models after studying the problem, and one was implemented. The students divided into construction teams and rotated tasks so that each team experienced all of the various building skills. Temporary bracing and shoring were used until the work was completed. The art teacher, students, and parents completed the plywood decorative cutouts, painting, and carpeting. Santillo hopes the project will continue with further changes in the library decor next year.

Four platforms were also built at Church Street School. In the second grade room parent aid was provided, the students worked in assembly teams, and the platform was completed in two afternoons. Two fifth-grade classes built space-frame models, struggling with the structural principles involved. They voted on winning designs and built the platforms.

A multi-age group of children with special problems, including some fairly severe physical handicaps, constructed a small wooden platform designed to fit through a three-foot doorway. The first session was a discussion with the students, many of whom had drawn up ideas on paper and talked about them. The second session was a hands-on day, with groups of three students working with assistant teachers. The children nailed, sawed and were generally busy at work on the project. The third session saw the assembly of the components previously constructed. This involved the coordination and cooperation of the entire group, working as a team to accomplish something that could not be done alone, and learning to follow directions. The class completed the project on schedule and were delighted with the final result.

Comment

There is a beauty in seeing everyone working together to a final cause, which when finished is a new, real object which they have all shared in.

Parent participation does many things. It envolves parent with child, parent with teacher, parent with architect, and is a way of providing a common denominator via the "project."

I suggested that the kids not be discouraged from starting over if not happy with their work - a way of saying "change" is a learning process. A second try often means more success and breaks one away from being locked into a "first effort" as something one has to live with.

Resident/Site	Residency/Resources	Program
Architect-in-Residence: DEBBIE SNOW FIEDEL SCHOOL Glen Cove, New York Site: Suburban Population: 135 students 38 faculty Grade level: Pre-8th In-School Coordinator: ROSLYN FIEDEL, Executive Director FIEDEL SCHOOL Bayville, New York Site: Suburban Population: 30 students 4 faculty Grade level: Pre-8th In-School Coordinator: ROSLYN FIEDEL, Executive Directo GLEN COVE LANDING ELEMENTARY Glen Cove, New York Site: Urban Population: 300 students 21 faculty Grade level: K - 5th In-School Coordinator: GEORGE PRIEST, Principal GLEN COVE HIGH Glen Cove, New York Site: Urban Population: 1200 students 90 faculty Grade level: 9th - 12th In-School Coordinator: FRANK MORAN, Counselor Project Coordinator: ROSLYN FIEDEL	The residency was divided among three schools, one with two separate campuses. From the end of August through May, the architect spent one day a week at each of the public schools and two days at the private school. This was the second year of Snow's residency. She worked with three classes on one day at the Fiedel School (3 and 4 year olds; 1st and 2nd graders) and at the Middle School on the other day. Fiedel has a wide range of students, including gifted and learning disabled. At Landing she spent mornings in her own class with small rotating shifts of students, and afternoons working with different teachers and their classes. She taught four classes in architecture at Glen Cove, and worked with students after school. A program of four teacher-training workshops, for which the Glen Cove School District gave credit, was held in April and May. The enthusiasm and support of the teachers and trust and support of administrators were of great value in the many projects.	In the Fiedel School early ages program, the theme was "soft environments." Three to five year olds made spaces and neighborhoods with refrigerator boxes and created "people structures" - walls, floors, columns made of people, and a fabric membrane stretched around people to see how their movements affected the space. They built and painted styrofoam walls, made string territories, a shadow mural, and a scrap wood sculpture. Inflatable structures came next, ranging from Baggie balloons to pillow shapes large enough to jump on or get inside. Sensory awareness was developed with blind walks and a Smell Museum with different substances (perfume, peanut butter, mint tea, garlic, etc.) arranged at pre-school nose height on a cardboard partition. The kindergarteners at Fiedel spent time learning about transportation and creating machines (boats, cars, airplanes, etc.) from liquor boxes, which could be moved by leg power. Afterwards, they designed and built a rolling toy, big enough for two or three to sit in, to be used in the playground. Their final project was the design and building (with the help of the middle school) of a loft structure in the classroom, to be augmented by a tower and a bridge next year. First and second graders surveyed and mapped the playground, then created changes in it in a Spatial Laboratory. Sheets, ropes and clothespins were used one week, tires another. On the basis of this experience, they designed and built a model of their ideal playground. Then, at the request of the teachers, the architect helped the class design and build a movable, storable playhouse of wood with hinged sides. The Fiedel Middle School classes developed building skills by designing and constructing a set of blocks for their classroom, and went on to build a Balloon City, with a "house" for each child, connected with crawl-through tubing so they could visit neighbors, which wound around the entire school basement. The final project for this class was a loft for their classroom, complete with supergraphics. Another class built real igloos and survival shelters, after studying both city building and primitive architecture.

Despite some scheduling difficulties at Landing School, many projects took place in structure, solar energy, and three-dimensional model building. An enthusiastic third-grade teacher worked with the AIS resident and her class to build a 150 foot inflatable digestive system ("Inside King Kong"), beginning with a stuffed tongue, teeth, and lips. For a public television taping, the students dressed as different foods, learned their nutritional value, and walked or slithered through the whole system.

The year at Glen Cove High School saw the completion of some projects begun or proposed the year before. The lobby, with the impetus of the art teacher, is now enhanced by a bright wall of silhouettes of various students. A group of students made a soft sculpture/wall hanging in several parts, which now hangs throughout the school. Another group, after some struggling with the idea of needing to plan, painted a mural with a sports theme.

Comment

The AIS resident came to the students and said, "Last year your city was for gerbils, what if, this year, you could build a city for you?" Impossible, they said. We couldn't afford that! It would take us too long! "What if," said the resident, "the city could be rolled up when you weren't using it and put away?" Oh, they said, like a tent, like a balloon!

Snow:

One of the best parts of the year was seeing the children in this class grow from fiercely defending their individual efforts into a more cooperative and collaborative spirit in the projects we worked on.

Resident/Site

Architect-in-Residence:

HOWARD WOLFF

W K DOYLE MIDDLE
Troy, New York

Site: Urban
Population: 1187 students
96 faculty
Grade level: 6th to 8th

In-School Coordinator:
PAT MILLER, Acting
Coordinator, Visual &
Performing Arts

TURNPIKE ELEMENTARY
Troy, New York

Site: Urban
Population: 669 students
50 faculty
Grade level: K-6th

In-School Coordinator:
GORDON BROWN, Principal

Project Coordinator:

MARY STIERER

Residency/Resources

Wolff's second-year residency was split by semester between two schools, where he worked three full days a week. The Rensselaer County for the Arts, sponsor of the AIS program, felt that the architect/designer's work load should be lightened somewhat for the second year, with fewer commitments and outside consultants.

The Arts Council was very supportive in all respects. Funds were solicited (and received) from area businesses and the local AIA chapter. The Council's newsletter and column in the local paper gave publicity to the program, while two editions of a special newsletter, Focus on the Built Environment, were issued. In addition, the Council plans to set up a resource center for teachers to help in the continuity of built environment education.

The AIA Eastern New York Chapter asked, in its newsletter, for architects to volunteer short periods of time as consultants in local school districts to help in continuation of the program. The Arts Council followed up with a questionnaire/request for help asking what architects would be interested in doing with students, at what age level, and for what time periods.

Donations included materials from local businesses, 300 connectable dowels from RPI, and money for materials from the Turnpike School's PTA.

Program

In his second year the AIS put more emphasis on introducing the design process into the program and on product-oriented activities. Awareness exercises generally became part of other projects.

At Doyle, Wolff worked first with a group of students in a remedial class, introducing them to building principles while they built towers and bridges, and encouraging them to look at books on the subject.

Working with a music teacher, he set up a series of lessons on "Playing a Building" to help students understand concepts of balance, symmetry and rhythm in music and architecture. Students built block structures which were balanced symmetrically or asymmetrically, then watched slides of architectural examples of these principles. Using a particular architectural example, such as a Greek temple, the students created a rhythmic composition based on what they saw. They then played what they had written and discussed the results. The music teacher is continuing this activity on his own in other classes.

A small but fruitful experience took place when Wolff invited three troublesome students to visit his office in their free time. Without explanation, he showed them a collection of parts and asked them to see what they could make. After some fumbling, the boys realized that it was an unassembled drafting table and managed to put it together. They were extremely proud of their work and often brought visitors by to see what they had made.

Toothpick sculptures in the art class taught structural principles. When students discovered the strength of the triangle they each made a sculpture based on it. The one selected by the students as best was constructed in the hallway using three-foot dowels connected by nuts and bolts. The high visibility of the project led the AIS to believe that it would have been better as an entry activity.

Teacher workshops and other afterschool activities were not possible at Doyle because teacher contract negotiations led to a "Work to Rules" attitude on the part of the faculty.

At Turnpike School, the second semester, Wolff used a bulletin board Mystery Tour as an entry activity. Fifth graders (and later, second graders) were sent on a treasure hunt to match details seen in the posted photographs. They then examined the school through the blueprints, learning new terms such as elevation, section, column, etc., concentrating on why things were designed as they were. They visited areas they normally didn't get to see and found the beams, ducts, and conduit above the ceiling tiles. The children had to be taught to look, but became perceptive very quickly. Later the school's architect visited and the students asked him questions about the building.

Second graders studied castles with the architect, reading fairy tales and studying slides. According to the teacher, through this exercise the children measurably increased their language skills. Eventually they built and painted a refrigerator-carton castle in their classroom, complete with working drawbridge and waving banners. Such terms as moat, keys, turret and portcullis are now part of their vocabulary.

A remedial math lab was set the task of measuring their classroom with simplified 4 foot cardboard rulers (meter and yardsticks had proved confusing with too many markings). After some difficulty in grasping the concept of scale, they built a model of their classroom. The project took off; the students measured each piece of furniture, created a model of it, and carefully painted it. Adding unlike fractions and converting measurements from feet to inches were a natural part of the project. The children were pretested in November and posttested in June, after completion of the model. Standardized test scores showed most of them had advanced one to two full grade levels in measurement and fractions; other impressive gains were found in areas of multiplication, problem solving, and abstract reasoning.

One fifth grade class, after analyzing their classroom needs and building a scale model, made an inflatable structure as a soft "reading room." Learning about the principles of inflatables with Baggies, dry cleaner bags, a hair dryer, and the Inflatocookbook took some time, frustrating the more impatient students, but most understood the value of planning. And all of them were delighted with the results.

The other fifth grade composed and presented a play on environmental problems in the future. The AIS helped with the script and assisted the students in planning and building a time machine, a futuristic kitchen, and a tri-wall car for the stage set. The time machine not only involved structural principles (how to keep the refrigerator carton from becoming a parallelogram) but brought out the need for working together on a project. Wolff helped the children discover that each had a different idea of what the machine would look like by having them each draw it. Once this was made clear, they were able to discuss the project sensibly and make a plan.

An Open House at year's end exhibited to parents and community the remarkable accomplishments of this residency. Meanwhile, teachers from Wolff's first year residency were using the design principles he had taught to help children create murals and inflatable structures.

Comment

Wolff on remedial math project:

The finished product was most impressive - the envy of all the school. Acoording to the teacher, this was the first time the kids in remedial math thought of themselves as "special" in a positive sense.

Wolff on second graders:

The next afternoon we talked about "planning" (as they later explained to their teacher: "First you think, then you do.")

Coordinator - Elementary Curriculum:

We spend a great deal of time emphasizing Back-to-Basics, which need to be applied in other ways than classroom drill. I saw the basics being very much used in every aspect of the program - verbal, math, new concepts, vocabulary building - it was active involvement of the students, rather than passive.

Resident/Site	Residency/Resources	Program	Comment
Architects-in-Residence SUSAN GOLTSMAN ARI HANCOCK SKYLAND INTERMEDIATE Winston-Salem, NC Site: Urban Population: 400 students 25 faculty Grade level: 5th & 6th In-School Coordinator: E T GIBSON, Principal	This residency was split into three time periods, totalling four months: mid-September to mid-December, mid-April to mid-May, and a week in June. Ari Hancock, an environmental designer, was actually working in the school from 7:30 to 4 every day during these periods, while Susan Goltsman, an architect, designed the projects, planned, consulted and documented on a 3-day a week, off-site basis.	The projects to be implemented worked generally through the themes of "The Environment and the Individual," "The Environment and the Group," and "The Environment and the Community." A progression of activities thus moved from self-image to city planning. The hour-long introductory activity, done with an art therapist, included every student in the school. Each was given paint, brushes, and paper, and asked to paint a monster attacking a castle. The monster was the painter, and the castle was the school. This opportunity for self-expression not only pointed out to the students that the AIS program would be different, but also helped the resident to see how well the students worked without continued direction. Several activities dealt with self-image and personal space. One sixth grade class designed personal symbols or logos, which were then transferred to blocks and printed on a large canvas. Another class made boxes, decorated with individualized collages, and combined them into a sculpture. One of the most successful program involved learning-disabled students, who traced each other's outlines on a 12' x 12' canvas. The students then signed their names within the silhouttes, filling the entire outline, and some of the body shapes were stuffed. The resulting soft sculpture mural was hung in a heavily used hallway and its creators have received much praise from other students. Some fifth graders spent four months learning about barriers for handicapped persons. After exploring the school as if they were blind, deaf, without arm use, or in a wheelchair, they documented the barriers they had encountered. The class developed a ¼ inch scale map of the school, circled and labeled the problem areas and then devised solutions. A finishing touch for the map was a section on which the students wrote their feelings about being handicapped. A group of fifth graders formed a design team for the development of a mural to enhance the school's front hall. After studying architectural styles, colors, and symbols, they created an art deco graphic which symbolizes the learning community. With a little help from their parents, they completed the project in six weeks. The city environment was studied in depth by a sixth grade class. Aided by visiting city planners, they learned about topography, site design, living and working spaces, and wind and solar orientation. The model city they developed was submitted to a six-hour evaluation by city planners. The model was then turned into a game board, with a city government, a weekly newspaper, and daily town council meetings. The students role-played actual city problems taken from the daily newspaper. The teacher continued to use this project as part of the year's curriculum.	Several of the teachers felt that this residency should have been for the entire year. They were enthusiastic and supportive, but mentioned the lack of time to complete projects.

Resident/Site

Architect-in-Residence:

RICHARD OHANIAN

PRINCETON JUNIOR HIGH
Cincinnati, Ohio

Site: Urban
Population: 1340 students
150 faculty
Grade level: Secondary

In-School Coordinator:
KEN STAUB, Art Teacher

Residency Resources

Ohanian worked five days a week at the junior high school, full time. The school is centered in the midst of a group of very diverse communities offering a full range of socio-economic environments.

He worked with a large number of teachers and classes, often following through on requests made by the teachers. Field trips were taken to area restaurants, a furniture store, and the Contemporary Arts Center.

Visiting consultants included a professor from the University of Cincinnati School of Architecture, a woman architect, and an associate professor of chemistry and energy expert from the Wittenberg University.

Ohanian cooperated in the production of a solar energy workshop held for school district science personnel. He gave a speech on his residency to a local historical society.

The city of Lincoln Heights funded a mural project done by the students for the Community Center, and had planned to get the students to design and build seven tot lots in the community had the residency continued.

The local AIA was involved in obtaining the residency and was very supportive. One member in particular became a mainstay, helping with resources and people. Ohanian gave part of a program on Built Environment Education presented at a chapter meeting.

Some of the funds designated for visiting artists were used to buy permanent slide/tape collections on the built environment for the school library. In addition, the librarian is attempting to build a collection for an environmental resource center with advice from the resident.

Program

As an entry activity Ohanian built a studio space for himself with studnet assistance. He found that this not only stimulated interest throughout the school but also challenged the abilities of some problem students who worked very well on the job.

Other projects followed in quick succession. An English teacher requested help for an urban score for the handicapped; her students were led on a field trip pointing up environmental barriers. A music teacher asked for a lecture on acoustics, which was followed by a trip to the Cincinnati Music Hall. A science class learned how to calculate sun angles for solar panels. In math classes Ohanian showed how to figure out personal energy consumption and how to estimate the cost of a building. Architecture as a career was studied both with career packets purchased from the AIA and with a lecture given by a visiting woman architect. In his studio Ohanian worked on designs for underground homes with students who visited him.

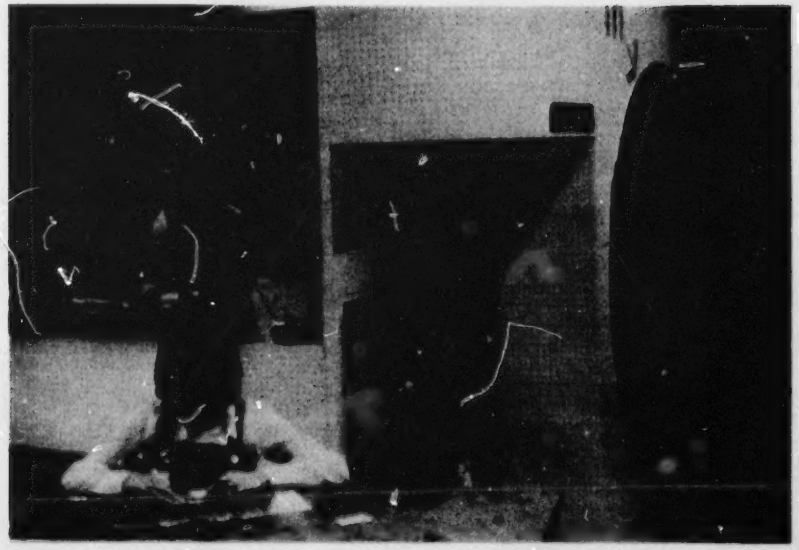
A number of major designs for visible products were evolved. A naturally graded space in the school yard was selected as an amphitheater. Students made up "wants" and "needs" lists and worked out designs for the space. A sculpture court design was evolved with 7th graders through building models of the space available for it and trying different designs. The creativity and care the students used in their work was a source of amazement to the resident and to the school's landscape architect. Neither of these projects was approved for actual building, but the resident felt that at least the design process had been worthwhile.

Another major design was evolved by the Academic Program for Talented Students. They worked on designing an underground reading "womb," dividing into teams to study all aspects from skylights to materials estimates. This, too, was not approved for building.

The resident worked with a drafting/woodworking class in the design and building of chairs. The students studied furniture catalogs and the book Nomadic Furniture, visited a furniture store, and made individual designs before dividing into teams to actually construct three of the chairs.

A Special Assistance group of classes worked on designing private space cubicles for their classroom. Twelve designs were created in model form, and two were approved for building as a test.

The mayor and city manager of Lincoln Heights, one of the neighboring communities, underwrote the cost of a mural on the wall of the community center done by the students. This project excited everyone who worked within the center and brought a number of parents in to observe. Again, some of the students involved in this were problems in the school but exhibited a fine sense of pride and responsibility in their work. The recreation director envisaged using student design and work in the construction of some "tot lots" in the neighborhood as well, as part of the youth employment program.



Comment

The math class was doing dog houses and dimensions . . . The architect asked what one would start with when designing the dog house, and everyone said things like the walls, the roof, and other parts of the building. When the architect slowly spelled the word DOG on the board there was a hush that filled the room like the aftermath of an electrical storm.

Oklahoma

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: DIANE JONES RUSSELL DOUGHERTY Oklahoma City, Oklahoma Site: Urban Population: 315 students 13 faculty Grade level: [illegible] 5th In-School Coordinator: RICHARD PURSLEY	Diane Jones worked in the school from January to May, 1978, after the previous resident was unable to continue. Community involvement was strong. The resident was part of the school planning team, including staff and parents, which met once a week. Parents participated in most of the projects and also raised money for materials. Art students from nearby Central State University helped fourth graders paint a mural. The local AIA offered to provide volunteers to work with teachers in building a playground improvement in the near future.	The main expectation for this residency was the creation of an environment more conducive to learning in the school. As the budget was very limited, this was largely accomplished with color and design, brightening an old, rather dark building. The resident, who has teaching credentials, was provided with her own classroom to which students came on a rotating basis. Students were involved in the design of murals and locker painting, working with the principles, feeling and flow of color, and did the painting of the first coats. Teachers and parents did most of the finishing work, although some of the more able students helped in this aspect. One mural depicted the World War II hero for whom the school was named in a war scene. Murals were completed in the main hall and in the halls leading to the classrooms. A playground design was developed and models were built. Construction was expected to be by the students with parental help and many materials donated by local merchants.	Site visitor. The principal stated that creativity among the teachers had "blossomed," and the majority are most enthusiastic. The students are assuming responsibility for preventing vandalism.

Resident/Site

Architect-in-Residence:

ROBERT GALANTE

FRANKLIN HIGH

Site: Urban
Population: 1710 students
86 faculty
Grade level: Secondary

In-School Coordinator:
JOHN SHEFLER

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Residency/Resources

The original term of the residency was from October 3, 1977 to March 31, 1978; it was extended for one month to April 30. Galante worked five days a week during this period. He was chiefly involved with classes in urban geography, biology, and architectural drafting, though other subject areas participated from time to time. A total of 600 students were reached.

A large number of community groups helped with time, materials, and tours. The US Fire Service participated in a workshop, the Portland Parks Department and the Planning Bureau donated maps, the Bureau of Buildings donated a building code booklet. The Oregon Historical Society sent photographs and maintained a continuing display on loan. An architectural firm supplied models and gave a tour; two architects and a rendering artist gave lectures and a workshop. Other guest consultants were a community design artist, a batik artist, a neighborhrod history expert, an educator, and an advertising expert.

Galante gave a workshop for credit open to all Portland area teachers. He wrote a regular column in the school newspaper called "Did You Know That . . ." and a number of articles were also published about the program. He printed and distributed a brochure about the AIS program early in the year.

Galante will be returning to the same school for a second year.

Program

In his work with the urban geography class, Galante made extensive use of field trips. The students took walking tours of the commerical strip and of an historic area with observation reports. They traced the history of buildings in their neighborhood through visits to the County Courthouse, the Bureau of Buildings, the Planning Department, the Oregon Historical Society, and the Neighborhood History Project. A slide show on downtown Portland, a discussion of the elements of a city, and land use simulations also were used with this class.

An unusual presentation was made to a biology class. Galante gave a slide show on the built environment and its relation to natural ecosystems. The teacher was very pleased and hopes to use the slides again. The lecture was entitled "Architecture: the Holistic Approach."

A number of activities involved architectural drafting or art classes. A two-day workshop on the design of symbols in advertising was held with a visiting consultant. A program on giving meaning to abstract forms and combining words with forms was held in an art class. Students also learned how to make a slide show, and the resident developed a slide show using David Macaulay's book, Underground. Barrier-free entrances to the school were designed, and some students entered a state-wide competition to design an ideal school. Galante also set up a program for some students to participate in a practicum, for credit, at the Community Design Center.

An inflatable dome for student multi-media presentations drew four to five hundred students. It was to be set up at various times during the year, to be used with movies, strobe lights, and colored lights to create different moods.

One of the most unusual projects was the design and erection of a cast-iron historical marker, showing the history of Franklin High School. Galante had done research about the history of the 60 year old building and had generated interest by publishing his findings in the student newspaper.

Comment

Galante:

It is most important that solutions are recognized by the problem solver. However, before we attempt to recognize solutions, we must be sure we have generated enough possibilities to insure the inclusion of a "best" possibility.

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Resident/Site	Residency/Resources	Program
Architect-in-Residence: MARJORIE WINTERMUTE CEDAR HILL SCHOOL Beaverton, Oregon HOOBERRY SCHOOL Hillsboro, Oregon PHIL LEWIS SCHOOL Tigard, Oregon TEMPLETON SCHOOL Tigard, Oregon WILLIAM WALKER SCHOOL Beaverton, Oregon OUTDOOR SCHOOL In-School Coordinator: JIM GORTER, Director of Outdoor Education	This residency was specifically designed to relate the Outdoor School program, run by the county for all sixth graders, to a study of the built environment. The architect spent a week with each sixth-grade class at the Outdoor School in October and November. Her schedule after that was flexible, totalling about 20 hours a week with twelve sixth grade classes in five schools. She spent half her time working with the teachers and half with the children. At the Third Annual Conference of the Environmental Education Association of Oregon, Wintermute ran a three-hour workshop on "Experience Space and the Man-Built Environment." She also co-taught a course in Urban Environmental Education for the Portland State University Division of Continuing Education. She serves on the National AIA Environmental Education Committee. An architect, a landscape architect, and a puppeteer were brought in as outside consultants. Additional funding was supplied by the parent/student organizations in several schools. Parents donated cable spools, plants and other materials, and made pillows and macrame hangings. The residency will continue for a second year at four different schools selected by the county.	During her stay at the Outdoor School, Wintermute helped the staff teach the basic concepts of energy flow, interrelations, cycles, community, adaptation and change. The sixth grade students learned to find examples of each in both the natural and the built environment. As they grasped each concept, their "Passports to Sunship Earth" were stamped with a symbol of that concept. These passports, which were small pamphlets, were reviewed at the end of the year as a closing activity. In addition, the students created quick murals recording their observations on morning walks which focussed first on the natural environment and second on the built environment. These murals provided an introductory vehicle for making the transition to the classroom. When she moved into the various schools of her residency, Wintermute set up a kiosk labeled "Architect" in each lunchroom during the noon hour and stationed herself inside it. The students crowded around, examined a T-square, a triangle, and an architectural drawing, and talked about what architects do. Most of the students seemed interested and aware of what she was there for, despite one conversation overheard: "What's that lady doing in that thing?" "I think she's selling tickets to the Outdoor School." Careful planning, working about three months ahead, made it possible to keep projects going at all the schools. The resident spent a four-hour session with each classroom teacher, supplemented by later sessions as needed. Activities were designed to move from the conceptual in the Outdoor School, through the factual into the experiential, building one on another through the year. Students kept notebooks with activity sheets and observations, using clipboards for this work when they were out of the classroom. Measuring experience, including "pacing" a distance, led naturally into mapping as a "factual" exercise. Students mapped the route from home to school, using paces, number of blocks, or mileage. They included landmarks, intersections, and stop lights, and were expected to be as close to scale as possible with a key to identify the scale and any symbols. From this they moved into measuring and mapping their schools, then surveyed and interviewed to find facts about the schools. Experiential activities included recording feelings about the school and about other places in the environment. Bus trips took the students to various places in the city, while they recorded on activity sheets things they saw which were Blighted/Beautiful, Clear/Crowded, Friendly/Frosty, Moving/Motionless, and so on. The concepts learned in the Outdoor School were reinforced in these activities. Children learned to look for patterns against the sky, patterns with rhythm, places that connect, materials that bounce back or soak up, architectural details, etc.

As a prelude to the final product-activity, students learned the steps in the development of an architectural project: research of the client ("It is important to spell the client's name right"), research on the site, and program development. The client in one school was Honey, the guinea pig; in another, Otis the iguana.

"Mind trips" to a special place revealed, through sketches and writing, an astonishing array of creative thinking; the places ranged from a round room full of computers to a fountain under a willow tree. A color study taught the psychological effects of colors; cloth swatches or paints were used to develop collages with color.

As a final project, Mooberry School students and a few from other schools entered a statewide contest to design an ideal school. The students learned so much from the experience that it is to be repeated next year. They had to submit site and floor plans with furniture and elevations to scale, one room developed at a larger sclae, and a written statement of the learning philosophy of the school.

Visible products at other schools included a Media Center redesign, a nature trail, a graphics system in the halls, two room designs, and models of three environmental game parks. For this last, a puppeteer helped the students put on a play about endangered species. The Outdoor School staff helped on some of these projects, particularly the nature trail/picnic area/playground. An opportunity here for student/community involvement was lost when the teachers were not told that a service organization was providing a playground structure. The structure, much like the one the students had designed, was simply "there" after spring vacation.

Slide presentations by the architect included "Seeing Your Environment," "How to Look at a City," "Identifying Architectural Details," "Residential Architecture," and "How Space Affects Us." For next year she plans a fall workshop involving teachers and architects and mini-courses with inservice credit for teachers. She will join three schools at the Outdoor School in the fall and the other in the spring, hoping to get an earlier start on in-school activities this way. The keeping of notebooks by the children will be emphasized even more strongly, as she feels it was very valuable.

Comment

The students were very doubtful about anything really happening, so the most important learning was that things do happen when you do some planning.

My experience is to think up creative ideas and then try to implement them. In the school experience the learning objective comes first and the project develops from that. I will have to do some work on that approach.

It was a great year but I can see so many things to do next year!

South Carolina

Resident/Site	Residency/Resources	Program	Comment
Architect-in-Residence: STEVE GOGGANS COLLEGE STREET ELEMENTARY Westminster, South Carolina Site: Small Town Grade level: K-6 In-School Coordinator: BRYAN JENKINS, Principal Consulting Architect: ROBERT MATTHEW, AIA	In this second-year residency Goggans worked the full year, four full school days per week, at the school. He worked with four core groups who were selected on a voluntary basis, representing a cross section of the school. This included a Title I reading class, a math class, an enrichment class, and a social studies class. He brought in an educator who specialized in using mapping skills for an October teacher-training workshop. Using AIS visiting artist funds, he brought in a graphics designer for five days for the hallway facelift project. The county administration had the interior walls painted with a base coat before the facelift.	Goggans divided his second year into five phases: seeing, describing, interpreting, synthesizing, and transforming. In order to reach adults as well as children, he focussed on mapping as a major tool for teaching. A two-day teacher workshop, with a consultant present, introduced the basic concepts by demonstrating how mapping could serve as the vehicle for linking study of the environment to traditional subject matter in the classrooms. Goggans pointed out that: *Mapping can serve as the vehicle for a more fully integrated, interdisciplinary learning approach, in every subject area. *Mapping develops students' non-verbal commuication abilities. *Mapping increases students' capacities for environmental interpretation, understanding imagery and patterns, and in understanding the way in which people use their environment. He felt that after using mapping in the "describing" and "interpreting" phases, those teachers who did not feel comfortable with becoming involved in building projects could go on to more sophisticated forms of mapping such as town trails. During the "synthesizing" phase, teachers reinforced concepts and decided on transformation projects. The core "transformation" was to be the continuation of the playground development. This was delayed, but was pushed through during the last two weeks of school. Shortly before this, a facelift for the halls was done. A graphics designer was brought in for five days, symbols and numbers were devised, and the project was largely completed by the teachers.	

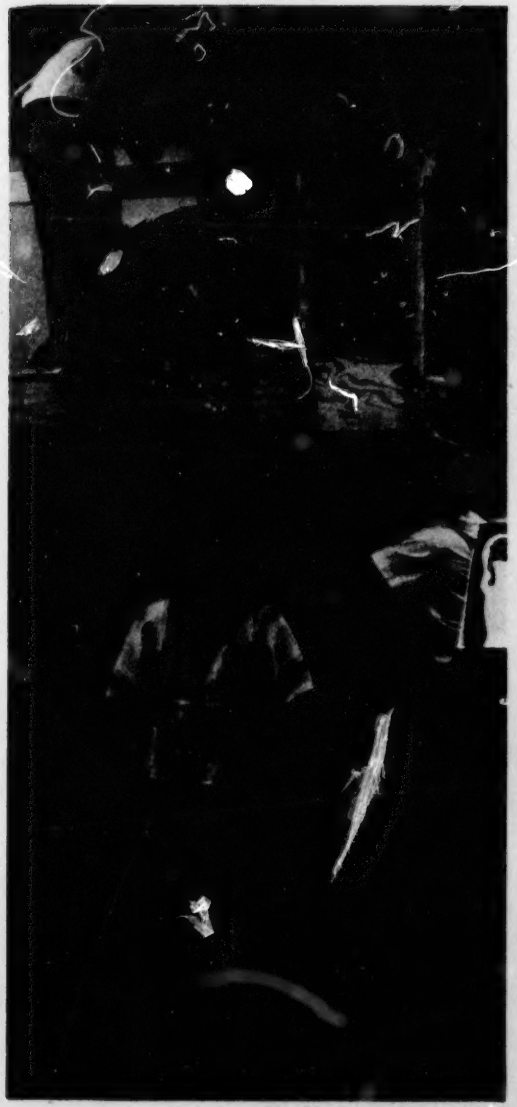
Resident/Site	Residency/Resources	Program	Comment
Architects-in-Residence: FRANK SPARKMAN DON FOSTER GEORGE HASSER TREWHITT ELEMENTARY & JUNIOR Cleveland, Tennessee Site: Rural Population: 2000 students 75 faculty Grade level: Elementary & Middle In-School Coordinators: DON GOFF RALPH BRYSON Jr & Elementary Principals	The three architects spent a combined total of five days at the school. Hasser worked in the elementary school, and Sparkman in the junior high on Tuesdays and Thursdays, while Foster joined Sparkman on Tuesdays. Despite a shared campus, the administration did not allow shared projects between the school levels. The Cleveland Chamber of Commerce offered support in getting free supplies for the projects. Consultants and outside resources included the architect who designed the two-year-old school, a photographer, a land planner, and a dancer. Funds were provided by the Tennessee Arts Commission and the Tennessee Association of Architects.	The teachers and administration of Trewhitt School were mainly interested in a product demonstrating good design, and in the integration of the AIS program into the regular curriculum. The architects in the junior high had to work largely within the constraints of the 55-minute period. The resident in the elementary school had somewhat more freedom, but worked chiefly with the 5th and 6th grades. Introductory activities to stimulate sensory awareness included, besides observation walks on the campus and "blind" walks, the creation of "un-human beings" with at least five nonhuman senses. The junior high students first wrote the descriptions of their creatures, then made posters of them using only basic cutout shapes pasted on manila paper. The 5th and 6th graders' slightly different project involved designing a monster, discovering its needs and activities, and then creating its environment; thus discovering the relationship between needs and environment. Students also tried to describe colors in words, make a color into an environment, and make an environment that was "important," "quiet," "happy" or other descriptors. They took an existing pattern in a room and changed its color or its shape to see how it would change the room. Ninth grade students moved on into scale models of the classroom and made constructions of cardboard to solve some acoustical and privacy problems. The architect who had designed the school was invited to bring his model and discuss with almost all classes his rationale. The students shared their feelings about the result with him. Many projects worked on the school environment. A 5th grade designed graphics and symbols to identify the various buildings to the visitor or the new student, and worked on making an interpretive map of the campus. Several junior high students designed large murals, involving symbols of the environment, which were transferred to masonite panels and hung in the cafeteria. Preliminary plans were developed for an outdoor space for eating, talking and studying, which may be implemented next year. Despite being allowed to use only hand tools, a 6th grade designed and built a recycling center outside their building, and evolved a student government along the way to help them organize themselves. The year was climaxed by a somewhat belated Sun Day, after a week of clouds. Sixth graders made a solar collector of black-painted aluminum cans, a solar cooker, a fruit dryer, and a solar still (for water). Older students silk-screened T-shirts, painted posters, wrote poems, and generally celebrated the day.	

Texas

Resident/Site	Residency/Resources	Program
Architect-in-Residence: JANET FELSTEN MATTHEWS ELEMENTARY Austin, Texas Site: Urban Population: 350 students 27 faculty Grade level: Elementary In-School Coordinator: MARSHA WHITE	The residency was for a full year in one school, approximately thirty hours per week. Felsten worked with teachers in their classrooms or with small groups of children in any available space; some projects extended into after-school hours with special groups of students. Mathews is an inner-city school which serves a naturally integrated community including a Black neighborhood dating from the 1870's, the University of Texas Family Housing with its transient international inhabitants, low-income Anglo and Mexican-American families and a growing number of professional people. It houses a thriving Community Education program, after-school child care, and serves as a meeting place for many community groups. There is high community consciousness and a strong desire to make the school a more attractive focus for the area. Local merchants were generous in donating abundant quantities of scrap material: carpet, upholstery fabric, wood, etc. The PTA offered time and enthusiasm for outdoor improvement projects, though funds were not available. Field trips were made to an architect's office and to the School of Architecture at the University of Texas. The local AIA was an enthusiastic supporter of the program, and the board wrote a letter of recommendation to the school board president.	As an aid to future space planning projects, the resident first devised a planning kit which proved very useful. It consisted of a 30" by 40" folding board covered first with 1" graph paper and then with acetate, accompanied by grease pencils and a full complement of 1" scale cardboard classroom furniture. After two kindergarten teachers used the kit with the architect to rearrange their rooms at the beginning of the year, one noted a lower noise level and a tendency of the children to spend more time at an activity after the activity areas were more clearly defined. The kit then moved into a second grade class with the AIS in a 40-minute daily session called Environmental Awareness and Classroom Design. The children examined their room in regard to personal and public space, color, texture, light, shape, size, emotions, etc. Innumerable awareness activities took place, shapes were described and measured, textures were explored, plans and models were made. One intriguing activity was to draw a cartoon about how you would wake up, go to school, get to your classroom, and eat lunch if you awoke one morning to find that you had grown to four times your present size or had shrunk to the size of your finger. After decisions the children worked with the teacher and the AIS to implement the changes they had planned in the room. A normally reluctant student, fascinated by three-dimensional design, created a green polyhedral structure as a private place, rotating murals were designed, voted on, and painted, and a library corner was created. Children and teacher learned to work on an equal basis, with respect for each other's opinions, perceptions and needs. The other second grade teachers have begun to want to arrange their rooms for the benefit of the children, and Felsten hopes to work more with them next year. One unplanned after-school activity took place after the architect heard two third grade girls arguing over the authorship of some scatalogical graffiti in the girls' bathroom. She told them that some people paint on walls to make places more pleasant, and that, if they liked, she would help them paint a mural. They participated with great enthusiasm. Shortly after the work was completed, one young artist caught one of her classmates scratching the paint. Outraged, she promptly hauled her off to the principal's office. No one has defaced the mural since that time. More mural painting took place in the counselor's office; a number of troubled third and fourth graders joined eagerly in decorating the walls and ceiling with scenes of children in a park. The project was extremely successful in improving self-concepts and peer relations.

In the cafeteria the wall designs were of a different order. A carefully structured sequence of activities introduced a fourth/fifth grade class to the principles of abstract design. Originally baffled by the concept, they worked at drawing and describing shapes until they began to understand placement, static and dynamic composition, and non-referenced descriptive words. Dividing into teams, they arranged carpet scraps into five 40" by 5' hangings and one 15' by 15' hanging. The AIS resident then glued the carpet onto canvas backings, and the hangings were installed in the cafeteria. The results were excellent. Children and teachers were highly complimentary, as were parents and community members who use the space after hours, while the designers were tremendously impressed by their own work.

As an extension of a unit on government, the project "Cities of the Future" evolved in a fifth grade class. They divided into four groups, each selecting a different type of site for their city; the choices were underground, aboveground, underwater and in outer space. Each group collaborated on writing a history of their city, explaining how it had evolved from today's world. They described the city according to an outline derived from earlier disucssions: size, population, government, food sources, housing, economic base, public services, transportation, education and cultural resources. After drawing plans, they built models of scrap materials on 40" square bases. Very much in command of the material by this time, the groups gave formal presentations to each other and to two Austin school administrators. Within the groups, children of all ability levels found channels for participation, and received first-hand lessons on the meaning of democracy, anarchy and dictatorship.



Comment

The resident, re second year, single site experience:

The Austin residency was far more effective at truly reaching people than the scattered-site residency in Abilene last year. It allowed in-depth relationships to develop between the teachers and students and the resident. It allowed more emphasis to be placed on process skills thus ultimately affecting the students and teachers at a more fundamental level than the product-oriented interactions in Abilene.

A second/third grade teacher:

When Ed pulls on Sheila's chair or pokes her in the arm, she now tells him to leave her personal space alone. The architectural program has been the highlight of our year, and we will continue to use our new awareness and knowledge of the classroom environment in the future. I share a great pride with the students for the accomplishments we have made and the environment we have created for ourselves.

Resident/Site

Architects-in-Residence:

RAYMOND GARDNER
THOMAS GARDNER

CEDAR CITY HIGH SCHOOL
Cedar City, Utah

Site: Small Town
Population: 650 students
37 faculty
Grade level: Secondary

In-School Coordinator:
JERALD HAWES, Principal

Residency/Resources

The Gardners were at Cedar City for one semester, working thirty hours per week. They met two hours with their own class and four hours with vocational classes. As the school's schedule was very structured, they could help as resource people largely by way of subject lectures in other classes. The administration was very supportive.

Local businesses helped with free or low-cost materials and tools. The local art gallery was frequently used as a resource.

The Iron County School District provided funds for construction materials, and the student government provided funds for carpet.

Program

After speaking to both the faculty and the student government about possible projects and resource uses, the architects "advertised" their presence by making and distributing posters and T-shirts.

Interactions with teachers were friendly, but projects with their classes were limited. Home economics students learned about architectural planning of a house, vocational carpentry learned about how trusses are used in construction and had a truss-building contest, humanities students had a lecture/slide presentation on King Tut's artifacts, and the architects also provided help with the science fair.

The architects' own class was the Cedar High Environmental Design Workshop, organized as a regularly scheduled class to teach design and construction and to undertake projects of benefit to the school. A series of field trips included: surveying, Zion National Park, geology and plant study, environmental assessment for housing, a solar-heated architects' office, an interior designer's office, and an art exhibit. The first project, a successful one, was "Design Your Favorite Environment." The students were able to visualize and draw or model an ideal environment, and got a feel for getting and showing ideas.

The class then created a Valentine's Hall as a gift to the school. The results were good, but the architects felt that a project requiring less original problem-solving would have been better this early in the course. The design and completion of a classroom painting and furnishings project, which came later, might have been a better introduction to large projects. The classroom was brightened by graphics, while a large wooden framework in one corner made space for seating and art display. The Valentine "relaxation room," however, was an inflatable structure which was a good experience.

The major project began with these students making designs and building models for the proposed student lounge remodeling. Despite a little trouble with the model-making, they were able to visualize and come with a group solution. This project was selected by choice of the administration, the student government, and the workshop class. As the previous student center had been destroyed by vandalism, the workshop students were very protective of their effort as it got underway. They were most interested when they actually produced a product. With the support of the administration and funds from the student government and the school district, the 30'x30' room was transformed by curved, carpeted seats which created a conversation area, backed by bright wall graphics. Pride in their work even made the graduating seniors ask permission to come back next year to "deal with" any offenders who damaged the room.

Comment

Site visitor:

The workmanship was very good, and I must give credit to Tom and Ray for insisting on such quality . . . the students seemed proud of what they were doing.

Virginia

Resident/Site

Architect-in-Residence:

RENGIN HOLT

JACKSON JUNIOR HIGH
Roanoke, Virginia

Site: Urban
Population: 704 students
43 faculty
Grade level: Middle

In-School Coordinator:
NANCY EVERSOLE, Art Teacher

FALLON PARK ELEMENTARY
Roanoke, Virginia

Site: Urban
Population: 965 students
45 faculty
Grade level: Elementary

In-School Coordinator:
SHERLIE DAHERTY, Art Teacher

Project Coordinator:

LESLIE WILLETT

Residency/Resources

Eight months of this second-year residency were in the junior high school, three days a week. In May and June, Holt moved to the elementary school for a brief stay. She worked chiefly with art classes at both schools.

Visiting consultants included an architecture professor from VPI who lectured on architectural design, and another architect-in-schools participant.

The elementary school provided all materials for the building of its courtyard.

Program

The initial assignment for the junior high school art classes was to create an imaginary city which would contain all the elements and functions they thought a city should possess, in an idealized order. They were to present this city in a two-dimensional plan and in an elevation. The students became very interested and excited as they learned to identify different building types. The designs were transformed by the use of abstract materials such as fabrics, glossy colored papers, yarn, and other found materials. Later, students used their city plan drawings and built small cities out of Lego blocks.

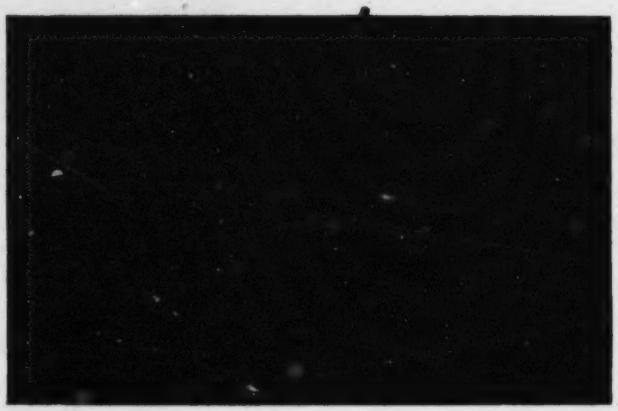
As a scale change, the classes next designed and documented a composition of rooms or spaces which would determine a house or a series of apartments. Implied in both projects was the opportunity for change in the students' own environments, an important concept for poverty-level children to grasp. The classes built individual models using 25,000 sugar cubes, glue, and illustration board. The AIS resident felt that the tediousness of using such small units to build with may have detracted from the effectiveness of the project, even though the use of items at one scale to create a larger whole at another scale was part of the learning experience.

A special educational class was introduced to architecture by assigning them the task of making collages. First they cut out all the buildings from architectural magazines which they found visually pleasing, both modern and historic. Then they were to organize orderly collages from their selected materials. Holt felt this was a good project for the gruop.

The final project for the regular art classes was painting the art room. The students found it hard to believe that they would actually be allowed to paint the walls. A lecture on architectural design by a visiting professor began the effort; then students created suggested designs, and finally painted. Great excitement was generated, to the extent of fights over the privilege of taking turns.

The major effort at Fallon Park Elementary was the design and building of the courtyard, but other projects also took place during the one-month residency. Third graders had a lesson on castles, fourth graders built marshmallow-toothpick structures, especially talented art students made collage designs for the courtyard, and all classes had the privilege of using Holt's enormous Lego set. All students were explosed to the role of the architect in the community through showcases, bulletin boards, and the school newspaper.

The courtyard was completed with enormous effort on the part of the fifth and sixth graders. They broke ground in May, carried 21 tons of crushed limestone, and laid 38 squares 6' x 6' of brick paving. The architect, in comparing this project with the high school courtyard built in her first year residency, commented "Elementary children exert a great deal of enthusiasm beyond their capability, with tremendous strength. For this reason it is a great pleasure to work with them, because there is nothing physically impossible to them."



Comment

Holt:

(In the city design project) their creative ability to express such spatial organizations at the public scale was overwhelming and a very happy surprise to me.

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Indianapolis, INDIANA 462

Vangie Piper
Tennessee Arts Commission
222 Capitol Hill Building
Nashville, TENNESSEE 37219

Nan Stillians
Iowa State Arts Council
State Capitol Building
Des Moines, IOWA 50319

Sterling Van Wagenen
(Chris Montague)
Utah State Division of Fin
609 East South Temple Stre
Salt Lake City, UTAH 841

Gary Young
Oregon Arts Foundation
328 Oregon Building
494 State Street
Salem, OREGON 97301